August, 1948

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EDISON ELECTRIC INSTITUTE BULLETIN

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PUBLISHED MONTHLY BY EDISON ELECTRIC INSTITUTE

ELECTRICAL RESEARCH STATISTICS
THE ELECTRIC LIGHT AND POWER INDUSTRY

Current Statistical Data Covering 100 Per Cent of Industry

May, 1947-1948

SOURCE AND DISPOSAL OF ENERGY - MONTH OF MAY			
GENERATION* (Net)	1948	1947	%
By Fuel Burning Plants	14,925,115,000	13,386,998,000	+11.5
By Water Power Plants	7,683,656,000	7,389,296,000	+ 4.0
TOTAL GENERATION	22,608,771,000	20,776,294,000	+ 8.8
Add -- Net Imports Over International Boundaries	124,300,000	117,485,000	+ 5.8
Less - Company Use	113,032,000	128,755,000	-12.2
Less - Energy Used by Producer	514,424,000	387,498,000	+32.8
NET ENERGY FOR DISTRIBUTION	22,105,615,000	20,377,526,000	+ 8.5
Losses and Unaccounted for	2,942,883,000	2,767,252,000	+ 6.3
SALES TO ULTIMATE CUSTOMERS	19,162,732,000	17,610,274,000	+ 8.8
CLASSIFICATION OF SALES			
NUMBER OF CUSTOMERS - As of May 31st			
Residential or Domestic	32,341,967	30,437,147	+ 6.3
Rural (Distinct Rural Rates)	1,596,259	1,451,377	+10.0
Commercial or Industrial			
Small Light & Power	5,038,331	4,822,212	+ 4.5
Large Light & Power	195,578	182,697	+ 7.1
Other Customers	137,684	129,485	+ 6.3
TOTAL ULTIMATE CUSTOMERS	39,309,819	37,022,918	+ 6.2
KILOWATTHOUR SALES - During Month of May			
Residential or Domestic	3,912,960,000	3,436,723,000	+13.9
Rural (Distinct Rural Rates)	452,297,000	514,294,000	-12.1
Commercial or Industrial			
Small Light & Power	3,382,397,000	2,994,162,000	+13.0
Large Light & Power	10,134,090,000	9,374,837,000	+ 8.1
Street and Highway Lighting	175,588,000	165,411,000	+ 6.2
Other Public Authorities	503,526,000	475,139,000	+ 6.0
Railways and Railroads			
Street & Interurban Railways	326,722,000	380,118,000	-14.0
Electrified Steam Railroads	220,020,000	223,795,000	- 1.7
Interdepartmental	55,132,000	45,795,000	+20.4
TOTAL TO ULTIMATE CUSTOMERS	19,162,732,000	17,610,274,000	+ 8.8
REVENUES FROM ULTIMATE CUSTOMERS	$ 341,687,300	$ 310,024,600	+10.2
RESIDENTIAL OR DOMESTIC SERVICE			
Average Customer Data - For 12 months ended May 31st			
Kilowatthours per Customer	1,498	1,377	+ 8.8
Average Annual Bill	$45.55	$43.38	+ 5.0
Revenue per Kilowatthour	3.04¢	3.15¢	- 3.5

* By courtesy of the Federal Power Commission

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EDISON ELECTRIC INSTITUTE BULLETIN

Volume 16 AUGUST, 1948 No. 8

What the Utility President Expects From the Advertising Manager

By Elmer L. Lindseth

President, The Cleveland Electric Illuminating Company

An address before the Annual Meeting of the Public Utilities Advertising Association, Cleveland, Ohio, May 27, 1948

TODAY the utility business as a whole is doing more advertising, and better advertising, than ever before.

But by comparison with what other businesses and industries are accomplishing with advertising, and in relation to present problems of the utility industry, it cannot be said that the utility industry is doing an adequate job of advertising, either quantitatively or qualitatively.

In view of what other businesses are doing, it might well be asked:

Why are the utilities that are using advertising energetically and effectively, still a minority?

Why are the utilities that are using advertising inadequately, without confidence in its power, still a majority?

Where is the fault?

How can it be corrected?

I hope these questions will be faced, fairly and squarely, here at this convention. I hope you will find the answers to them—and that when the answers are found, they will be applied with vigor and zeal.

Four Partners

I hope this can be done in order to bring the maximum benefits of the power of advertising to all our companies, and to the four parties with interest in them—the customers, employees, investors and the public.

Do this, and you will be doing the first thing the utility president expects from the advertising manager.

I know this is a large order.

To fill this order, the advertising manager first must be able to convince the utility president that the advertising is well worth all it costs.

When utility presidents are considering problems of engineering, accounting or financing, they usually are on familiar ground. But when they are considering problems of advertising, many of them are in a less familiar field.

Take engineering as an example—and I speak now as an engineer who puts high value on the power of advertising.

Engineering and Advertising

I see only one basic difference between engineering and advertising. Both must be imaginative, creative, progressive and productive. Both also must justify the expense of carrying out their plans and programs. At this juncture, the engineer usually is able to produce a quantitative measure of results, but the advertising man ordinarily has been unable to offer comparable supporting data.

In executive control of a business like ours, prime dependence necessarily is put on figures. It is a serious handicap to any department, and especially to the advertising department, to be lacking in comprehensive, convincing figures.

Utility presidents naturally shrink—and should shrink—from supporting advertising on a by-guess-and-by-god basis.

This does not mean that advertising departments have been altogether lacking in figures. They generally have been able to employ figures substantiating the results of straight sales promotion campaigns. And the figures have justified the cost of such campaigns over and over, by their effectiveness in selling electric, gas, telephone and transportation service.

But straight sales promotion advertising is a relatively simple operation, compared with public relations advertising.

And it is public relations advertising of the highest order which the utility business most needs today, to achieve the best possible relations with our customers, employees, investors and the public—and to prevent further socialization, nationalization and confiscation of utility properties.

Public Opinion Polls

The utility president should expect the advertising manager to be the mainspring of his company's public relations advertising. He further should expect him to substantiate the results of his public relations advertising with convincing figures.

Fortunately, advertising people have much better tools with which to do

this today, than they had a few years ago.

There now are available the methods of measurement developed by Starch, Hooper, Nielsen, Gallup, Robinson and other leaders in the new science of surveying public opinion and evaluating people's reactions to the printed word and illustration, the motion picture, the radio broadcast and the telecast.

The No. 1 stumbling block to better use of public relations advertising in the utility business is the lack of adequate development and application of techniques for quantitatively measuring results.

Even though advertising, like politics, may be more of an art than a science, it takes figures to tell the results of political campaigns, and likewise figures are needed to tell the results of advertising campaigns to influence public opinion.

Produce the Figures

The utility president wants the figures!

And the advertising manager who can produce the figures—or who can develop ways and means of producing the figures—will be doing an invaluable service for his company, for the utility business, for advertising, and for himself!

The strength of advertising is confidence. The strong advertiser is the confident advertiser. The strong advertising manager is the one who develops the methods and tools that justify confidence. The full development and use of such methods and tools is vital to successful utility advertising.

In the utility business today, we need the best of advertising, together with all the other strength we can muster, to meet three paramount, pressing problems.

One is the problem of obtaining the billions of dollars needed to finance the new construction programs of the gas, electric, telephone and transportation industries.

Two is the problem of inducing customers willingly to pay higher rates for utility services to offset the higher costs of supplying these services. Only by raising rates can the utility business collect sufficient revenues to support adequate service, to provide proper compensation for employees, and to realize earnings that will attract more capital to provide more service as the customers require it.

Three is to attract the higher quality of manpower that will be required to manage and operate these companies successfully in the years ahead.

A Business to Grow With

In order to solve these problems,

We must acquaint and satisfy investors of the ability of the utility business to safeguard their investments, and also to earn and pay a reasonable and satisfactory return on the funds they entrust to us;

We must engender in our customers a livelier appreciation of the values of the services we supply to them, and a full realization that it is in their own best interest to pay adequate rates to support these services;

We must convince present employees and desirable prospects for future employment, that we will continue to provide good working conditions and good pay, with security, recognition of work well done, and opportunity for advancement.

Above all, the people in the utility business must be inspired to pitch their sights high enough to envision the unlimited potential of these utilities for growth, and for themselves to grow with them.

To you advertising men and women, these problems present a new challenge and a new opportunity, the equal of which you've never had till now.

DURING THE NEXT FIVE YEARS the utility business in America—gas, electric, telephone and transportation—must finance billions of dollars of new construction.

What is advertising going to do to to help get this money?

DURING THE NEXT FIVE YEARS the utility business must make substantial increases in rates.

What is advertising going to do to help convince the customers and regulatory authorities of the need of these increases?

DURING THE NEXT FIVE YEARS the utility business must recruit, train and hold thousands of the most promising graduates of the nation's colleges, universities and high schools.

What is advertising going to do to help enlist and develop this army of superior young people for utility service?

To set our sights on the size of the job ahead for the utility business, let's use the electric business as an example.

Let's first take a look at the progress the electric business has made in the past 30 years, and the progress it may expect in the next 30 years.

The residential electric customer of 30 years ago paid an annual bill of about $20, used 260 kilowatthours a year, and paid more than 7½ cents a kilowatthour.

Today's customer uses five times as much electricity, and pays less than half as much per kilowatthour.

Last year, the nation used more than 10 times as much electrical energy as it did 30 years before, and nearly three times as much as 15 years ago.

Looking Ahead Thirty Years

Now let's project the industry's growth during the next 30 years, at one-half the rate of that during the past 30 years. Please note this premise carefully. It may be arbitrary. It may be unimaginative. But the results are astounding.

If the electric industry grows in the next 30 years at one-half the rate it grew in the past 30 years, annual kilowatthour sales 30 years from now will be One Thousand Billion Kilowatthours. We shall be in a new series of numbers, producing and selling One Trillion Kilowatthours annually.

By corresponding projection, the total annual revenues of the electric industry rise from about Four Billions to Fourteen Billions, and the property and plant account may increase from Fifteen Billions to more than Eighty Billions—a figure that exceeds by Ten Billions the total 1941 assets of all manufacturing corporations in the United States.

If future progress in the electric industry is half that of the past, new construction for replacement and expansion during the next 30 years will take the amazing total of One Hundred Billion Dollars.

If these figures don't spark the imagination, I don't know what could! And the prospects for growth of the gas and telephone utilities parallel those of the electric utilities.

Think, first and foremost, of the

(*Continued on page* 288)

The Heritage That Is Ours

By Louis V. Sutton
President, Carolina Power & Light Company

An Address presented at the Seventy-Sixth Commencement of Virginia Polytechnic Institute, Blacksburg, Virginia, June 14, 1948

YOU are leaving this institution with its blessing upon you at a serious juncture in the nation's history. Both at home and abroad the republic is beset with exceedingly difficult problems, including an attack on our way of life.

While these problems are not insoluble, they call for the best that the nation has in honest, intelligent and courageous leadership. Any faltering in spirit or wavering in purpose can have the gravest consequences.

You have been well equipped for the tasks which will come to your hands. The simple fact that VPI awards you its degree today is convincing proof that you have perseverance, mental alertness, energy and technical skill.

Here you have learned intellectual discipline, the factual approach to problems, the interdependence of cause and effect, the supreme importance of research and originality and the need of straight and honest thinking. Here you have received that education which was described three centuries ago by John Milton:

"I call, therefore, the complete and generous education that which fits man to perform justly, skillfully and magnanimously all of the offices, both public and private, of peace and war."

The New Tempo

The need for the type of service which you have been carefully fitted to render, was never greater than it is today. We are living in an age of ever widening scope and of ever quickening tempo. Never before has society required so much for sustaining and enriching its life. As the mechanism of life becomes more complex, men of sound technical training are demanded in increasing numbers to plan, design, build and operate the vast machinery that serves our wants and our wishes.

You are fortunate in that you are graduating out of an American college into the extraordinary responsibilities and opportunities of American life. This means that you will be able to garner a maximum of life's riches and satisfactions.

Above all and most important of all, you are graduating into an economic and political society that is free. Ours is a land of vast natural resources; but our greatest resource is our heritage of liberty. We are freemen—not bondmen—in the work we do, in the government we enjoy, in the lives we live. We command for ourselves as do no other people in this modern world what the late Justice Brandeis called the most prized right of civilized man —"The right to be left alone."

Liberty or Doles

There are those among us who scoff at the American way of life. Many of them pray with their starry eyes turned toward Moscow as the Moslem prays with his face turned to Mecca. They would have us exchange the priceless blessings of political and economic liberty for a regimented society. They are the frustrated and the foolish among us. They esteem liberty so lightly that they would barter it away for the promise of a dole.

Their fatuous arguments are conclusively refuted by the only evidence that technically trained men respect and accept. Look about you in this vast world. Where has civilization, economic, social and political, reached its highest level of excellence? Is it behind the Iron Curtain? The answer is as plain as the explanation is inescapable to those who have been trained in the laboratory and in the exact sciences. Ideologies like trees are known by their fruits.

Considerably less than two centuries ago this country was just thirteen little colonies huddling timidly along the Atlantic seaboard and dependent upon the Old World for most of its manufactured goods and many of its essential services. Today the United States is by every standard of reckoning the richest, the most powerful and the freest nation in the world. Here civilization has flowered as it has flowered in no other land and in no other epoch.

The evidences of our superior material wealth abound on every hand. They excite the envy, not always amiable, of other peoples. With less than 7 per cent of the world's population living on only 6 per cent of the world's land, we produce one-half of the world's goods. Upon our farms we grow enough food to supply our own wants and to fill the needs of millions in other countries. We drive 85 per cent of the world's automobiles. We generate one-half of the world's electricity. Our people have 50 million savings bank accounts and 75 million Americans hold almost 200 million insurance policies.

This wealth is not enjoyed exclusively by a few. It is shared by all. Our workmen with the shortest work-week in the world command the largest wages and enjoy the highest standard of living on this—God's green footstool. They have automobiles, radios and other conveniences that in other lands are the exclusive possessions of the economically rich and the politically privileged.

Material and Social Progress

Social and cultural progress has marched hand in hand with material progress in this nation. In its relatively brief career as an independent country, the United States has built 4 times as many colleges as the rest of the world has built in any similar span of time. During the past century and a half the United States has established 5 times as many libraries as all of the other nations built during the same period. We are excelling in the arts. In no other land has philanthropy reached such dimensions of generosity and of usefulness.

The recorded history of man affords no parallel to the United States. I

say this in no spirit of idle boasting. I say this in no wish to draw invidious distinctions between ourselves and the less free and less fortunate peoples of other lands.

We have set up no political and economic Utopia in the United States, and I know you would dislike to be a young man graduating into a Utopia and having no unfinished work to be done, no perils to be run, no problems to challenge your imagination and your exertion. Man grows in the outreach of his character and his capacity as he has obstacles to develop his muscles and to draw forth his courage. Much of the greatness of America today is due to the fact that in the beginning there was a continent to be mastered and that the young nation had men and women who took scant account of social security and dared to accept chances.

A Fairer Society

Obvious as are the imperfections of our political and economic society, they are trifling indeed compared to the defects that curse and even degrade the inhabitants of so many other countries. Fortunately, being the free members of a free society, we have it within our choice and our power to overcome our weaknesses and to build a fairer society. A democratic people with a free economic and political system are truly the masters of their own destinies.

This is a machine age. As graduates of a technical college you have been trained to play vital roles in a machine age. That is your glory and your own opportunity. Truly this era has been tailored to your specifications.

There have always been those who look upon the machine with deep and dark suspicion. Too often they accept it as a sinister conspiracy against the jobs of men. Textile workers rioted violently against some of the first textile machines produced in Great Britain. In their short-sighted rage, they saw a malediction in what was really a benediction for them and their nation.

Actually the machine increases jobs. Any derangement in employment which a labor-saving contrivance creates is always temporary. When Arkwright invented the first spinning machine in 1855, he proved to be the greatest friend that the British textile workers ever had. He made more secure and more plentiful employment in the textile industry. He stimulated that industrial revolution which brought such wealth to Great Britain in the last half of the century.

Within the relatively brief span of my own lifetime I have seen the machine transform the lives and multiply the employment of the American people. In 1890 when the machine age was in its early stages in this country there were 18 million persons—or only 29 per cent of the total population—gainfully employed. Today 60,000,000 persons—or 43 per cent of the total population—are so employed.

The social benefits which the machine confers upon the human race are incalculable. It has freed man from the back-breaking drudgery of other days. Through the increased production which it provides, it has made possible the short work-week and the leisure which the worker now commands. It has brought, within the reach of all, comforts, conveniences and even necessities that were the reward of only the few a century ago. It has added to the dignity of the individual by lifting him above the level of the mere drudge. It gives him a new sense of mastery by multiplying his strength prodigiously. Did you ever watch a steam shovel operator sitting on his little throne and biting huge chunks of dirt out of mother earth? He is truly the lord of all he surveys.

Privately Owned Economy

The principal difference between our economic system and all others is that ours is a privately owned economy. The profit incentive is a spur to all men. That is the real basis of success in America—the hope for reward—the incentive to produce, together with the necessity of competing with others. Incentive might be called the spark plug of our system. Incentive is what makes our system tick. We do not rely on the myth of perpetual motion under government ownership with no incentive and with nothing to drive one on except necessity or fear. Great Britain's slogan last year, in an attempt to get more production, was "Work or Starve."

Here in our country the profit motive is coupled with private ownership and as a result we have today in America 3½ million businesses and 6 million farms, all privately owned, where men and women are producing goods and services in competition for a portion of the national income. Sumner Slichter, the eminent economist, expressed this all-important truth in one memorable sentence, "No regimented economy can hope to compete in dynamic drive with an economy which possesses nearly 10 million centers of initiative."

Of course, capital is needed to provide machines, tools and plant facilities. One hundred years ago it took only $580 in capital to provide a job for the individual workman in this country but he labored 70 hours a week at back-breaking, health-wrecking tasks for a wretched existence. Today there stands back of every industrial employee in this country $6,500 in invested capital. He works only 40 hours a week in pleasant surroundings and at relatively easy chores. His hourly earnings in terms of dollars are 16 times as high as they were a century ago (from 8 cents an hour to $1.29 per hour). In terms of purchasing power, they are nearly 6 times as great.

Small Savings Capitalists

The capital necessary to provide the complex mechanism of this machine age must come from the capitalist who is an essential factor in our private enterprise system. Too often he is thought of as the bloated bondholder or the arrogant stockholder who maintains his office high up in the canyons of Wall Street. Actually the capitalist is every man or woman who has a savings account, a life insurance policy, a share of stock or a bond. Capitalists in America are the families and individuals who are saving for their old age or for their children or for the emergencies of life. Many of the large corporations actually have more stockholders than employees. The most authentic statistics show that 90 per cent of all of the nation's stockholders have incomes of less than $5,000.

The economic system which produces the greatest supply of material benefits for the greatest number of people is indisputably the system which provides the greatest good for the greatest number. That system is the private enterprise system which has been developed to such a high degree of efficiency and productivity in the United States and which has contributed so much to the security

and power of this republic. It has enabled the average American worker to manufacture and to possess more than 6 times as much goods as the average worker outside of the United States.

The essential worth of our economic system received its most striking demonstration and vindication in the second world war. During this conflict one nation outproduced the combined facilities of the Axis powers. That nation was America. Behind the battle-lines, nations engaged in a grim race to produce a weapon of total destruction. The scientific genuises of many countries contributed to the final discovery of atomic energy and design of that lethal weapon, but only one nation possessed the industrial capacity to produce it. That nation was America.

World-Wide Responsibilities

The United States is the only major power that still preserves the free enterprise system in anything like the pure form. Communism has engulfed much of Europe, and Great Britain has embraced a modified socialism. Threatened with widespread starvation and economic collapse, Europe turns helplessly and beseechingly to the only nation that can produce enough to supply its own needs and to save the world. That nation is America—America with its political freedom and its private enterprise system.

The task of building a strong, prosperous, happy America is not finished. I have spoken to little purpose if I have left with you the impression that our present situation can be viewed with complacency. We have merely climbed the foothills of our towering opportunities. The machine age with its infinite capacities for our country is just in its opening chapters.

You are fortunate indeed in the training which you have received at this institution. You are blessed in the fact that you are entering upon business careers in such a time as this and in such a country as ours. You are greatly favored among the young peoples of the earth in that you can make your place and find your opportunities and rewards in a free enterprise system and in a truly democratic society. That system has proven its merit. It has brought America to its present high estate among the nations of the earth. It has carried us through the perils of war. It has given to the average American a standard of living, a sense of personal dignity and a free life which are enjoyed by no other peoples in anything like the same degree.

Hold fast to that system of free enterprise. Economic freedom and political liberty are inseparable. You cannot throttle one without weakening and destroying the other. Economic regimentation leads inevitably to political regimentation, and political regimentation results sooner or later in the fatal undermining of democracy.

This system of private ownership and management of industry comes down to your generation as a heritage from the past. It is a sacred legacy. It is none the less sacred because in its actual functioning it will serve your happiness, your freedom and your prosperity. It is as essentially American as the Stars and Stripes. It is just as much a part of the free traditions of this republic as the Declaration of Independence.

Few of you will enter politics and seek your satisfaction in the pomp and circumstance of public office. Most of you will find your happiness in making the mechanism of our modern society work more efficiently and more fruitfully for man. You belong to that great breed that Rudyard Kipling described in one of his most stirring poems. By personal choice and professional training you will be Sons of Martha:

"It is their care in all of the ages
to take the buffet and cushion the shock.
It is their care that the gear engages;
it is their care that the switches lock.
Not as a ladder from earth to Heaven,
not as a witness to any creed,
But simple service simply given
to his own kind in their common need."

I envy you your youth. I envy you the opportunities which you will have to build a stronger America and a more prosperous society for all upon our free political and economic institutions. God bless you, all down the days of your lives! God speed you in every task to which you place your free and trained hands!

5 Midwest Utilities Link Up 4-State Power Pool

WITH the closing of a switch on June 20, at a power station of the Iowa Power and Light Company on the southeast fringe of Des Moines, The United Light and Railways Company realized plans first published in 1941 for the creation of a power pool to serve a Midwestern area with a population of more than 2,000,000. Actual system-wide pooling, however, did not begin until July 1.

The closing was the last in a series that had energized a 467-mile transmission line at 161,000 volts to interconnect five of the six operating companies in the United Light system. Starting from the Quad-city region of Davenport, Iowa, and Rock Island, Ill., the line straightens out into the west to connect generating installations of Iowa City and Des Moines, and then angles off to southwest Iowa and later to St. Joseph and Kansas City, Mo. It then slants over into Kansas, to Paola and, reduced to 69,000 volts, to Moran, where Eastern Kansas Utilities, Inc., hooks on to carry the lower voltage to its terminals in Fort Scott and Humboldt, Kansas.

Thus there were linked together the Eastern Kansas Company, Kansas City Power & Light Company, St. Joseph Light & Power Company, Iowa Power and Light Company, and Iowa-Illinois Gas and Electric Company.

Two years a-building, the line was constructed by the operating companies at a cost of more than $12,000,000 to unify the operations of generating plants with a total capacity of 600,000 kilowatts, and with a planned capacity of 840,000 kilowatts by the end of 1951. But the pool operations, through a central control station being built in Des Moines, are mainly the responsibility of The United Light and Railways Service Company. Its Power Pool manager, C. B. Kelley, serves with a committee of two engineers from each of the operating companies to determine the uses of the line and the generating stations it interconnects.

Utility Radio Networks Prove Value to Community in Portland Flood Area

By W. A. Leidigh, Jr.
Chairman, Northwest Utility Radio Association

IT WAS Sunday, May 30. Some ten public utility two-way cars and trucks operated by the Portland General Electric Company and the Pacific Power and Light Company were speedily disconnecting electric service to keep ahead of the rising flood waters of the Columbia River in the area of Vanport, just north of Portland.

At 4:30 p.m., without warning, the main railroad dike gave way and the entire Vanport area covering 951 acres was flooded to a depth of from 5 to 15 feet within a short time. Immediately, the dispatchers of both companies, with all other communications disrupted except that of the two utility radio networks, organized switching procedures to cut off all power lines in the area. Instructions from the two-way car operators soon convinced central dispatchers located approximately ten miles from the scene that a disaster was in progress and it was imperative from the standpoint of life and property that this be done. It was done, and in short order, in a way that would have been impossible were it not for the radio communications made possible by two established utility radio systems.

Before evening, through the efforts of these utility cars, central dispatchers had every available portable lighting plant owned by both companies on the scene helping with rescue work in cooperation with the authorities. Throughout the night, and along with regular duties of clearing lines in the flooded area, many radio contacts were handled for organized relief agencies requesting food, blankets and other necessities to be sent to the stricken area.

Radio Car Lost in Flood

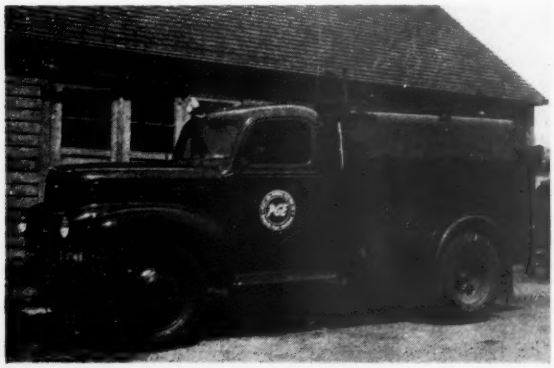
The next day brought the problem of saving the second dike supporting the three-lane highway at Denver Avenue, and clearing electric service in case of its failure. Utility crews were ready for the break when it came at 9:15 p.m. except that one Portland General Electric Company two-way radio car did not clear when a section of the three-lane pavement washed out at the break and two floating houses were carried over the man and car by the onrushing water. Neither man nor car has been found at this writing. Some 500 additional acres of industrial and residential property were flooded by this time, but due to orderly evacuation, loss of life was confined mostly to a number of stock animals.

During the next few days electric utility crews working on a 24-hour basis, with still no other communication than radio, cooperated with authorities by connecting necessary services and disconnecting services that were considered hazardous. Obviously, switching of this kind requires the utmost in co-ordination between central dispatchers and the service men.

At 1:40 a.m. on June 1, the Union Avenue three-lane highway broke through and flooded 925 more acres of property. This was followed by another dike failure at 4:30 a.m. on June 11 that flooded the Portland Columbia Airport and included 8,417 acres. By this time a total of 10,793 acres of industrial, home, and farm property in and near Portland was under from 3 to 15 feet of water. Some 60,000 people were made homeless and 15,000 homes damaged or destroyed. Damage is estimated at from 80 to 100 million dollars in the lower Columbia River area.

A radio-equipped tug boat with line crew was used to patrol 11,000-volt lines near Rainier, Oregon, and also to get at "Substation" half submerged in water. Water was so close to lower 11,000-volt line on poles, that it had to be killed.

The two electric utilities involved lost considerable plant and equipment, but they were able to serve the community well, with established and regularly maintained facilities used in day-to-day operation.



One of the Portland General Electric Co.'s 2-way Radio Trucks Equipped with 75.5-McLink Radio Corp. Units used in Vanport Emergency.

Vanport Flood area showing the Denver Ave. 3-Lane Highway Dike after the Break-Through in which Portland General Electric Lost a 2-Way Radio Truck.

Effective Organization for Industrial Power Sales

By F. McQuillin
West Penn Power Company

An address presented at the Adirondack Industrial Power Sales Conference, Sacandaga, N. Y., June 8, 1948

IN West Penn Power Company we have a solid basis for all the functions we perform. And that basis applies to power sales. It is: "Business starts with the customer." Our sales organization is most effective when it is organized on the way our many different customers like to and are prepared to do business. If our customers operate on a remote headquarters basis, our engineers cover both the plants and the headquarters. If our customers do business on a local basis, our engineers work on a territorial basis.

For that reason we must recognize:

1. The need for additional sales helps, and
2. More efficient methods, particularly methods that will mechanize some of the sales steps and methods that will multiply our effective sales interviews.

Our Expanding Economy

In the long run, we're traveling forward in an expanding economy—by increasing the number of things we use. If I compare very briefly the first year after World War I and the first year after World War II, you'll agree that's a fair basis.

It is true that from postwar I to postwar II our population has increased from 105 million to 144 million people. And so, of course, we use more things—but our expanding economy means *more things per person.*

In '20, after World War I, we had 8½ million back-breaking, slow-running automobiles—one for every 12 people. Now, after World War II, we use 25½ million bigger automobiles—one for every six persons. In 1920, we had no radios—or practically none. In 1946 we had 30½ million radio-equipped homes—we listened to good music, fair drama, and lousy comedians. And in those same 26 years we gained:

13 million electric vacuum cleaners,
17 million electric washers,
20 million electric refrigerators, and
3½ million electric ranges.

Among the basic durables—

2¼ times as much steel per person,
5 times as much aluminum per person,
3½ times as much plate glass per person.

Zigs and zags to the contrary, our general direction is up. We all have more things we use.

American business research, advertising, publicity, and pictures of these things at work, and competent, top-notch salesmanship created this expanding economy. And it is our continuing responsibility. Although the recent commodity drop warned us that 'IT', that 'zag', may arrive, we are still traveling upward.

General Industry Problems Need Sales Action Now

There are five major general industry problems each needing help through power sales activities.

First, we are nearly loaded up. We are committed to spend six billion dollars in expansion and that capacity must be *sold.*

Second, new generating equipment costs much more than our present equipment. We still have a long way to go to get more kilowatthours per kilowatt of capacity. That is another sales job.

Third, our prices are based on old costs. As it becomes necessary to raise our prices (and that seems inevitable) the difficulties of doing that will be much less if we have the definite support of our customers. That will be a sales job.

Fourth, demand for money exceeds supply. We are competing with all industry for that money. Our selling activities must emphasize the drive for sales that maintain earnings, including our increased costs. That is almost a new sales job.

Fifth, business continues at all-time highs. Of course, that brings on the attitude: "Well, perhaps we'd be better off without some of this industrial business—perhaps we don't need industrial sales." I'd like to tell you about one little utility in Maryland that tried that. Some six months ago they had generating capacity of 9,000 kw with about 8,880 kw load. They were forced to consider either purchasing additional generating equipment at the present very high costs, or to buy from an adjacent utility. They decided to buy new generators and firm commitments were made.

In the process of reaching this decision, one of this utility's executives said, "Perhaps we'd be better off if we didn't have this industrial business." This attitude was reflected to his industrial customers. They took him seriously. The load of this little utility is today about 5,500 kw. They have oodles of capacity now and are committed to buy more. Now they are trying to sell once more. A full page ad by this utility says, "WANTED—1,000 New Stores, Homes, Industries, etc." I forgot to tell you that this was a politically financed and managed company. Of course, no business-managed company would ever fall into this error.

So, the five major general problems of our industry today are crying for direct sales action now.

Specific Sales Problems

Here is our new sales pace.

During the last four years, 1944 through 1947, our national selling efforts have resulted in increasing total station demands about 11 million kw.

Over the next four years, our sales departments will have about 15 million kw of new generating equipment to load up. And that is probably very conservative.

Assuming we've planned for proper reserves (1952 model) in the nation

as a whole, we have a 36 per cent faster sales job (over one and a third times as fast), that is, 4 kw now for every 3 of the last four years.

That illustrates our New Record Sales Pace.

Industrial Loads Still Biggest Portion

Now, these capacities are for the residential, commercial, and industrial requirements. What bearing does that have on industrial sales?

The records show that, despite the excellent sales results from promoting use of more electricity in homes and stores, the industrial men still have the heavy end—as a matter of fact, about the same proportion you've had for 20 years. That's how we industrial men like it!

But you have *more leisure hours—very few contact hours available*—less time to do this job.

Let's see what time you have in a year. Out of the 365 days, you sleep a third of the time; you play, study, or just fool around a third of the time; add Saturdays and Sundays, national holidays, and four days for head or tummy-aches—and then four-fifths of that year is already gone. Only one-fifth of the year is apparent selling time.

But you also spend time preparing, traveling, 'heel-cooling,' and 'routing yourself like a pretzel." You spend time, too, in consulting company and manufacturers' men. To which we must add time necessarily spent on both outside and inside education and teamwork (and you have to tell the boss what you're doing), three-fifths of the apparent selling time gone! As a result, your true selling days with all the customers' personnel comes to only 96 normal working days!

Ninety-six real and true selling days! So the power sales engineers all over the nation have a selling job totalling about 7,800 kw an hour for the next four years for every hour they are actually consulting with their customers.

This may not be an impossible job while we're 'zigging,' but what about the problem while we're 'zagging'?

That sales job will be *stupendous!*

That's enough to show the need for additional sales help. But, in addition, our customers, like ourselves, are getting bigger and bigger. There are more people to see, more viewpoints and prejudices to remove, and a larger number of industries coming in the next four years.

Then, too, we probably kept the number of our most competent industrial sales engineers at a minimum. We have done little recruiting, we have little time for training and refresher activities.

The sales personnel of equipment manufacturers has changed enormously—many of our old dependables are gone. Aren't new friendships with their new men another vital need?

That is not all. Some sales executives have reduced, or even cut out, the amount of printed knowledge they have been sending to their industrial markets, and some manufacturers have reduced the amount of available material.

Such people are hoping their competitors will hibernate—will take a snooze—at the same time, but I doubt it.

They're hoping their customers will continue to remember them—I doubt it.

They're hoping these customers will always come to them first—I doubt it.

Surely you are now agreed that the practical limit of individual efforts requires that we consider additional marketing methods.

And here is an approach for today's industrial sales needs. Let us consider just how we do create sales in five steps.

1. Contact all the men who directly or indirectly control the purchase of our services and equipment.
2. Arouse interest in our service and equipment to use it.
3. Create preference for our service.
4. Make a specific proposal—applying our service to the prospect's problem.
5. Get the order.

How can we do more of each of them—to meet our new objective more effectively—at lower cost?

***Printer's Ink*—"Electrified Industry"**

Two methods are now in successful use to some degree:

1. Printer's ink—much more use of the printed word and pictures of 'Reddy Kilowatt' in action to inform more customers more often, about more things.
2. Get-togethers of customers, utilities, and manufacturers — to multiply our sales interviews.

My first suggestion is much greater use of printed words and pictures of electricity—"Reddy Kilowatt," in action. This is nothing new, but we need more of it, if it is directed to definitely performing the specific function of our first three sales steps.

One nationally used magazine was introduced with the theme that it was to be as "Terse as TIME, as interesting as LIFE, and as attractive as FORTUNE." The E.E.I. Power Committee had long been looking and collecting data for a magazine suitable for your customers, regardless of what industry they were in, at a minimum expense. This magazine solved that problem. Through this magazine, inquiries from customers concerning new applications come to the utilities almost every month. Its name is *Electrified Industry.*

Magazines like this make the first three steps of sales—contacts, interest, and preference in the minds of the industrial customer—with a great saving of time.

***Printer's Ink*—Planned Lighting Material**

The E.E.I. "Planned Lighting Program" has excellent material to cover the industrial lighting market. Many successful electric companies are using it. It, too, will make the first three steps of a sale at low cost.

Other well-known examples on a local basis are: The Cleveland Electric League's magazine *Electrical Production,* whose purpose is to inform people how to use electricity, how to increase and improve production, and how to reduce accidents, and is extremely successful in helping both the Illuminating Company's industrial sales engineers and its customers; Philadelphia's 4-page pamphlet, *Industrial Tips;* Pittsburgh's similar pamphlet, *Industrial Topics.*

Undoubtedly many of you have similar pamphlets or material of which you are quite proud. I'm sorry I cannot mention them all.

Each of these make the first three steps of a sale —contact — interest — preference.

These are some of the successful techniques of our own industry. Let's pave the way for industrial sales engineers with more use of the printed word and pictures so that we will continue to be market leaders, not followers.

For the good of all of us let's build our prospects through a living printed page. Let's mechanize our first three

sales steps. To be a winner let's do what the winners do.

Get Togethers—"More Power to America"

The second suggestion is for far more group meetings composed of customers, utilities, and manufacturers, including the planning, organization, execution, and follow-up.

The "More Power to America" program has been in operation since 1946. It is a planned program for getting together the electric utilities, electric and machinery manufacturers, and your customers. It aims at acting together, at the same time, on the same subject by all these interests to increase the amount of electric power in the hands of the worker. They set up a four-year goal, just as we are doing today. But their goal was not as high as ours is today. Many utilities have had satisfactory experiences with it. Here is just one of them.

Paul Lyman, our entertainer from North Carolina, held five meetings on the Laundry Program, attended by over 160 laundry people. In addition, there were men from the electric company, manufacturers, and laundry machinery manufacturers—a success-making combination. These men met and came to know the laundry people as never before. Electric power was installed in two plants—inferior power was kicked out. How long would it have taken to interview 160 laundry people and an unknown number of manufacturers, to get these results by the individual contact method?

North Carolina plans to continue the "More Power to America" program when "Dielectric Heating of Wood" or "Electric Drying of Textiles" is available. Their market research shows there is a big market in their area. General Electric is now cooperating with North Carolina and others on these subjects.

At the E.E.I. convention, the executives of two large eastern companies told me they were preparing plans for using "More Power to America," commencing in the fall of this year.

"More Power to America" will multiply your sales interviews.

Get Togethers—Tri-State Lighting Exhibit

Sparked by the "Planned Lighting Program" of the E.E.I., three fairly large utilities got together with manufacturers. They planned, organized, executed, and followed up a "Tri-State Lighting Exhibition and Conference," sponsored by their Electric League.

It was a four-day meeting, held about two months ago. Every day the rooms were just not large enough—the audience "busted out at the seams."

One company had over a third of its industrial revenue represented by plant managers, engineers, superintendents, some vice presidents, and one president, many of whom had to travel 150 miles, all seeking solutions to their lighting problems.

One plant manager went home completely dissatisfied with his plant lighting. Next day he said, "Boy, I'm a back number!," and requested the industrial sales engineer to make lighting plans to put his mill on a "Planned Lighting Program" basis.

Get Togethers—Foremen's Meetings

Duquesne Light Company's meetings of plant foremen are something new to me. They both entertain and instruct their audience on light sources and good plant lighting.

One foreman said, "Gee, that's a swell show—and what a relief to stop squabbling about union regulations!"

Each of these meetings multiplied the number of sales interviews.

Get Togethers—Heating Shows

Utilities in Buffalo, Detroit, Chicago, Pittsburgh, St. Louis, and many other cities have sponsored Industrial Electric Heating Shows. Here, too, the demonstration and conference idea was carried out.

The attendance at one of these meetings of the vice president of a new industrial company sparked the idea of a completely electrified plant, including electric heating for a cooking process and complete comfort heating (they were connected up two weeks ago)—in a natural gas and bituminous coal territory!

At the same exhibit, a power engineer saw a heat treating application suitable for a customer, got the manufacturer and the customer together, and made the sale. Pittsburgh gets a nice chunk of kilowatthours. Philadelphia got some electric furnace manufacturing business, and there were no commission charges from Pittsburgh.

Get Togethers—G.E. Lighting Institute

For many years, at least one utility has sponsored two trips a year by some of its industrial customers to the G.E. Company's Lighting Institute at Cleveland, for a one-day program of demonstration and conferences. They are limited to 50 to 60 people. The last group of customers represented revenues of five million dollars a year. On the way home, one chief engineer said, "I kinda wish I hadn't gone. I have just completed the wiring and lighting plans for our new central office building. Now I'm going to have to tear them up and do them all over again."

Another engineering trained president was so interested he designed and installed a complete new lighting system strictly according to the book, prodded a little by a power sales engineer.

Get Togethers—Summary of Benefits

In summary, group meetings help the customer, the manufacturer, and the utility. They save the customer's time and give him expert information easily—in a good weather sales climate. The manufacturer meets more prospects in a day then he can meet in four months. And that is just as true for the utility.

Such group meetings permit our sales forces to concentrate much more of their limited working time on the personal consultation that they alone can do—and do best. Manufacturers have excellent base material. Successful electric companies, spotted all over the country, are already using this means of load building.

Remember that in salesmanship, the eyes are the windows to the sale! Group meetings show "how to make a minute sell an hour!" They mean money to all of us.

Unless these actions are taken, we may find ourselves with oodles of capacity, and that means oodles of dollars, on our hands and no place to go.

Months and even years pass before prospects sign on the dotted line. Much of the effect of all sales activities is a delayed effect. The work you do in 1948, even in residential and commercial activities, builds load and revenue for 1949—and sometimes later. Big industrial work is much slower than this. Obviously you cannot press a sales switch to turn sales "on" and "off." If you don't believe it, go out not knowing any customer problems or personnel—cold turkey—and try to make a power sale. Sales activ-

(*Continued on page* 286)

The Public Utilities

Reprinted from Lon Scott News, Tulsa, Oklahoma, August 5, 1948

REGARDLESS of how poor they become some people always budget themselves, pay their bills promptly and enjoy good credit rating. They are not the sort perhaps who write stirring poems, chisel fine figures in marble, invent new tools for commerce or swing a heavy vote for their party in elections but they are to be commended. Their frugality and prudence have been the saving graces of society. They steady the boat over rough seas and come to shore with dignity and enough wampum to lend a hand to the more derelict.

I might have been thinking about something in the funny papers when the lessons on credit and budgets were discussed in my schooling. I missed some of the fine points at any rate, and on that account I have missed some meals in my career. It has always been hard for me to resist the temptation to buy books or participate in monkeyshines and occasionally I have delayed paying bills to do something that seemed more appropriate at the moment.

Payments Deferred

If one is going to be tardy with his accounts he should be fair about it. He ought to include the phone company, the gas and light people and the water department. I never played any favorites and when it came their turn I delayed payment on the utility bills. They used to drive out promptly, and I always felt with a heap of gusto, and turn us off. The utilities at our house have been turned off more times than there are detours on the path to peace with Russia.

When the New Deal smear brigade had the utilities in their political wringer to soften them up for shake downs and forced cooperation with some of the big city bosses I had more reason than most to add some din to the cacophony against them but never did. I have always refrained from indulging in any communistic legerdemain conjured up to make industrial benefactors look like public enemies. I admit the utilities have been feasors of many profitable torts but their long time record proves eloquently they have been signal benefactors to the public.

If it had not been for the brave souls who invested their savings in ideas and machinery for making electric power all of my relatives and friends today would still be working at low wages to produce by hand what power through electric current produces mechanically and cheaply. Our homes are filled with beautiful kitchen cabinets, stoves, refrigerators and other appurtenances to comfortable living. None of those could be made by hand at a price within the reach of our millions of users.

Nowhere else in the whole world are wages so high, nowhere else are comforts so commonplace as here. We didn't arrive at this fine station in life through hand labor. We won our comforts through power, electric power and gas power and steam power and water power, because the utility companies had foresight and nerve enough to make it and sell it to us cheaply. They harnessed our natural resources in many instances and sold what nature had provided, of course, but who today would want to trade our results for the probable status if they had been less bold and venturesome.

How much work could we turn out today without our electric power? You are right, very little. The electricity produced in our nation now is equal to 7,000,000,000 (7 billion) man hours per day, which figure is estimated to be about three and one-half times the total population of the earth. Our power is our work, our work is our wealth.

It depends on who is doing the compiling whether national wealth shall be put down in terms of health and education, or as scenic grandeur and natural resources, or as capital reserves and population, or as agricultural and industrial potentials. You can add it up under any heading that suits your fancy. I like to think of national wealth in the light of security and comfort, that is, security in times of war and comfort in times of peace.

Security in war and comfort in peace come from one source and that is the power to produce. No other countryman can produce like we Americans. Our ability to produce so much per man comes from the energy we can buy so cheaply from our public utilities. No city is so large, no town so small in our land that we cannot push a button for as many hundreds or thousands of horsepower as is required to turn our lathes, our presses, our saws and other tools with which we make the tools for commerce, instruments for war and comforts for homes. America is the richest nation on earth and we owe our national wealth to the help we receive cheaply from our public utilities.

Except for the government plants which we support through taxes (or subsidies) we do not pay a single penny for the privilege unless we choose to turn on the utilities and use them. If we prefer to do it the hard way we can still cobble shoes, saw lumber, hammer metal, sew, pump water and wash diapers by hand. Those of us who feel no appreciation for the men of daring who risked their capital that we might become the most comfortable and secure people on the face of the earth ought to try the hard way for a while to become properly aware of the worth of the man who is a saver and investor.

The Utilities' Contributions

The utilities never have paid me a penny for anything—I have never been identified with them in any way except as a customer, behind on the payment of bills—but when I weigh their benefits to society against the waste we've had in government during recent years, and when I compare their financial soundness today with our deficit spending and national debt which must be a burden on every person who labors in our land during future years . . . I wonder if we would not have been wiser back in 1932 had we turned our government over to public utility engineers instead of to the New Dealers. If the time ever comes when it appears we are headed for government by more left-wingers and free-wheelers I believe I will arise in my shabby clothes and advocate that we turn to the public utilities for administrative advice on how to keep our country secure and comfortable without spending in taxes what we individuals ought to be saving.

More Power To America

By J. O. Roser
Central Station Division, General Electric Co.

An address presented at the Adirondack Industrial Power Sales Conference, Sacandaga, N. Y., June 8, 1948

MOST of the time during this conference we have been dealing with the future and its opportunities. Just for a little break in the program, I want to go back in history for a few years—specifically, to October 27, 1944, when there was assembled in Atlanta such a wealth of representation from utilities and the General Electric Company jointly that our government was fearful that we were anticipating peace too soon, and we changed our plans.

However, the change in plans did not prevent our making the initial presentation of our More Power to America Program.

In the Beginning

At that meeting in Atlanta, we said in summing up the story:

"We are not bringing to you now the story of our postwar industrial products and their load-building values. These we will have, or already have, and they will be the means of increasing the kilowatt-hours per manhour.

Far more important, it seems to us at this time, is the building of an organization, and alliances, and the creation of a master plan for selling industrial electrification, because selling and promotion solidly integrated will be at an all-time high premium after the war.

"More Power To America" is a scientifically designed solution to one of your biggest problems. It is based on a searching analysis of that problem. It has not one superficial element in it. There is no magic in our program, except the magical results that come from intensive cultivation by the use of scientific methods and good hard work.

"More Power To America" *is the intensive cultivation* of every plant and every industry in your territory, year in and year out, by our proposed triple selling alliance. Its success depends on these three all-important factors:

1. Recognition that it is a long-term job.

2. Recognition that the job cannot be done with a small staff or on a shoe-string operating budget. The power salesman of tomorrow must be an imaginative *methods engineer* who increases the electrical energy content of the job by showing the plant operator new and better production methods. As such, he should merit full support from top management.

3. Recognition that despite the soundness of this program it will succeed or fail to the degree that there is mutual confidence and respect among the participating groups at all operating levels in the local properties."

The Follow-Up

Immediately following the Atlanta meeting we carried this story individually to practically every operating utility in America.

This 2-day meeting at Adirondack Inn symbolizes some of the progress made in carrying through that program in recognizing: that it is a long-term job; that it requires money and effort; that being a cooperative proposition it requires mutual confidence and respect.

This kind of meeting represents one approach to this aspect of overall M. P. A. "LOAD" magazine, and the M. P. A. industry programs themselves, are other ways of keeping you abreast of new developments, and partially fulfilling our commitments. All this material will help us mutually to maintain the steady growth which industrial America has enjoyed and which may in the future have even more significance, not only to America but to civilization as a whole.

Through the careful choice of some well-established facts, I want to develop a different angle on one of the problems that may face us in the electrical industry.

Fig. 1 shows the first fact (75 million kw in 1952) that is now recognized will be the installed kw capacity for the delivery of electric power by the end of 1952.

I'll try to show the tremendous job that has been done in the past three decades in making electricity available to the American people. Then I want to show that even though we were giants in those days, the job we have to do now makes it look as though we were relatively more like pygmies only a short generation back.

Giant Tasks Ahead

I want to show you in anticipation of the job we have to do, how seriously we must evaluate every opportunity that is made available to us for promoting the use of electric service. To

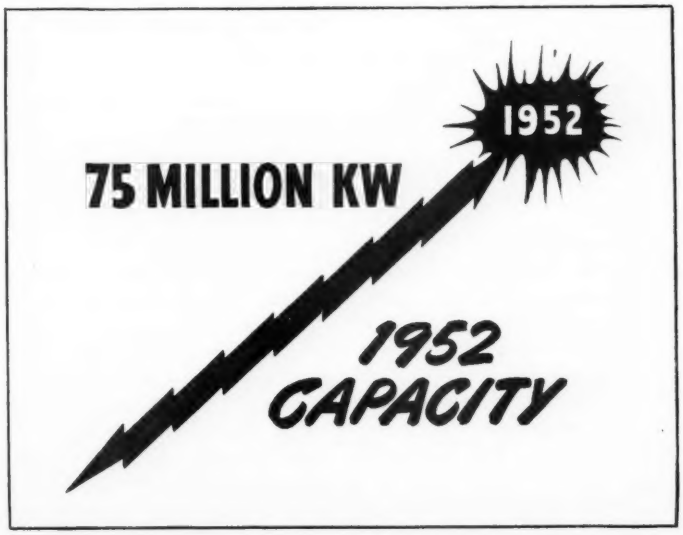


Fig. 1

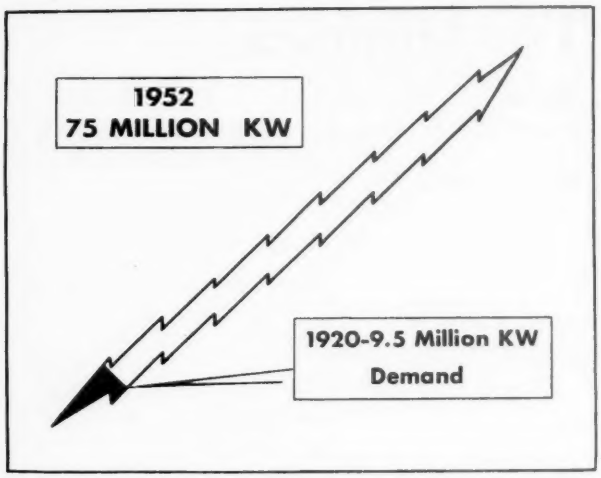


Fig. 2

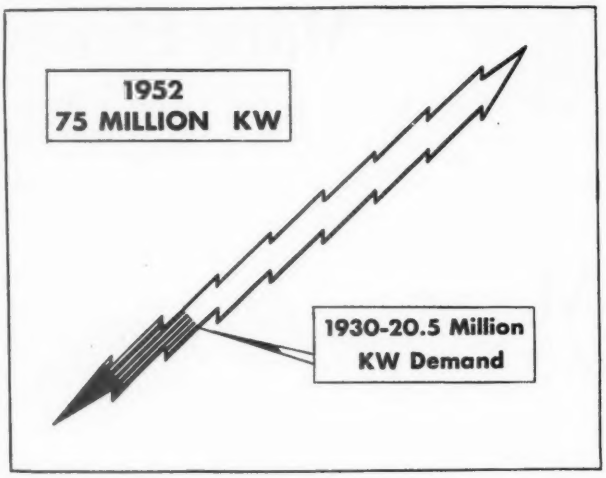


Fig. 3

establish my premise, let's look for a moment at the job that faced the electrical industry following the first world war.

Selling Central Station Power

Fig. 2 shows that in 1920 the national demand for electricity reached 9.5 million kw. The job in the industrial and commercial market at that time was recognized largely as selling blocks of power to replace the equivalent of isolated plant generation. It was necessary to demonstrate to this class of customer that central station service was dependable—to prove to the isolated plant operator that the philosophy of self-sufficiency, and independence of central station power supply was not necessarily correct and probably did not produce the lowest operating costs.

There were many individual plants with capacities under 2,000 kw. A large number were in the small capacity range between 25 and 200 kw. These had been installed in the period when the central station first began operations, before utility personnel had had much experience in the handling of loads beyond those represented by residence and commercial lighting. As experience grew, revenue possibilities of these isolated plant loads were recognized as basic to the success of the power industry, and great efforts were put forth to demonstrate the reliability and flexibility of central station service.

Many locally-owned utility systems sponsored intensive programs by which industrial power engineers of the type we visualized at Atlanta in 1944 were developed. They gained a national reputation for their contribution to the development of equipment, such as: industrial heating and metal-melting equipment. Thus, what started out as a program of promoting central station service as a substitute for isolated plant generation, developed into a program for promoting increased electrical usage in industry. And, coincidentally, this program brought about the development of basic industrial electrical equipment.

That era was characterized by liberal appropriations for sales promotion, and the results achieved more than justified the appropriations made annually. We will probably never appreciate how much those results had to do with the remarkable job done by the electric power industry during the last war.

Phase of Consolidation

In Fig. 3 we see that in the decade of the 20's, the national load started with 9½ million kw peak demand and by the time this decade had closed, it was 20½ million—an increase of 11 million kw (more than doubled) in 10 years. That decade was characterized by individual company growth and also by the consolidation of many locally-owned properties into larger systems. While major operating economies were effected by these combinations of properties and were reflected in more favorable rate levels, this phase of progress in the industry was not fully appreciated.

We draw from Fig. 3 a figure I'd like you to remember, a growth in demand of 11 million kw in 10 years, an average of 1.1 million kw per year.

1.1 Million New Kw Per Year

In the next decade (see Fig. 4), by 1940, the load had grown to 31.5 million kw demand. Now note that, with the contrast between the lush 20's and the depression 30's, in each of the 10-year periods the growth in demand was 11 million kw. We might stop here and say this establishes a pattern of 1.1 million new kw demand per year with 20 years to prove it. Lest we accept this too readily, let's jump quickly to 1948.

The 8 years of the 40's in Fig. 5, show we have jumped from 31.5 to approximately 50 million kw, an increase of 18.5 million of new demand in 8 years, and an average per year of 2.3 million increase. This rate of slightly over double the previous two decades was, of course, stimulated by the war and recovery period, and we accept it as an established fact.

But now, we're post-war—still in recovery but making good progress—so I'm going to evaluate the job of the next five years in terms of the past.

In spite of what might have looked like optical illusions in some of these charts, we've kept that capacity symbol of 75 million kw installed by the end of 1952 always the same and the lengths of the respective demand sections are to scale.

In Fig. 6 we've taken the 1952 capacity of 75 million kw as a goal for demand, and we've assumed a 10 per cent margin of reserves. Now I hear a

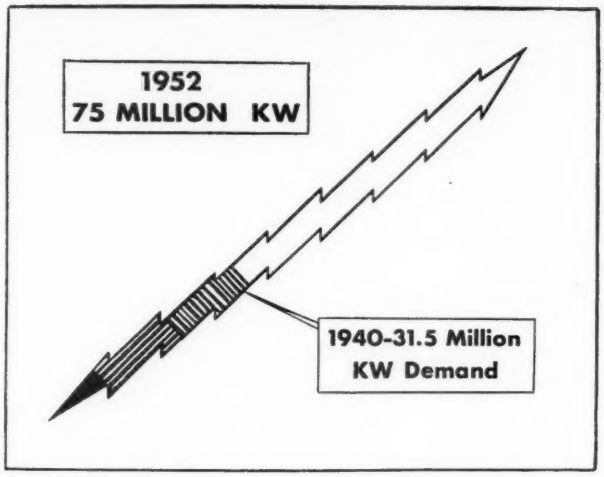


Fig. 4

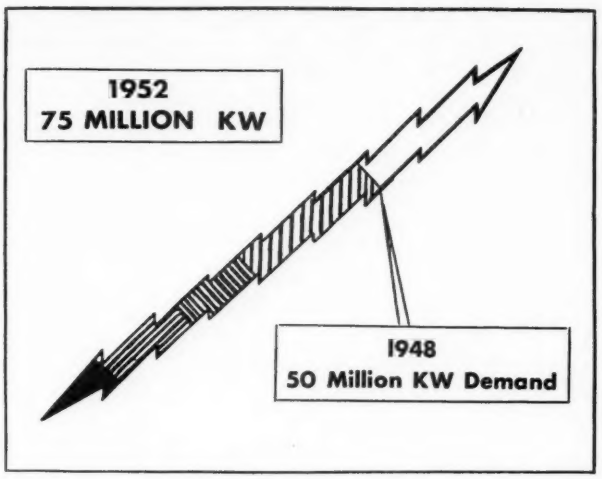


Fig. 5

lot of silent comments that this isn't large enough. Maybe not, but you got through 1947 with 5 per cent, and you're going to have a lot of money invested by 1952, that in our economy, is invested with the expectation of earning a return, and idle equipment of any kind is not earning equipment. Besides, let's look at it another way. The central station industry is generally considered to have started in the early 1880's. So by 1920 we were practically 40 years old. Now do you notice that the margin I have indicated for 1952 of available capacity over justifiable developed demand is 7.5 million kw, almost as much margin as the total demand in 1920 of 9.5 million.

For the time being let's assume that 7.5 million kw reserve capacity is safe and what do we see? A load growth to be developed when expressed in terms of demand, representing an increase from 50 million to 67.5 million kw in 5 years. This is an average of 3.5 million per year. I'm not going to confuse my story by injecting diversity factors, or how many kw you have to sell in connected load to increase concurrent demands, because I assume that stays relatively the same. I only want to emphasize that 3.5 million kw.

This annual rate of required increase in load is 3.2 times that of the two decades of 1920-1940, and 1.5 times the accelerated rate of the war and recovery years (see Fig. 7).

I submit, therefore, that this represents a challenge to the power sales organizations of the electric utilities throughout the U. S. that cannot be ignored.

In accepting this challenge to electrical manufacturers, as well as to utilities, the philosophy of M. P. A., has added the *element of cooperating allies*—all with the common interest of greater mechanization, modernization, and electrification of America.

The isolated plant field has been largely cleared up by the work of previous years, so that the field of greater central station service lies in developing new and wider applications of electricity in industry, and particularly to those broad phases of small industry widely distributed throughout all communities. And, incidentally, one of the finest examples of this type of industry is still typified by that one which we used as the basis for our first M. P. A. program. A recent poll of the laundry industry shows a very much greater appreciation of both the wider application of electric power and

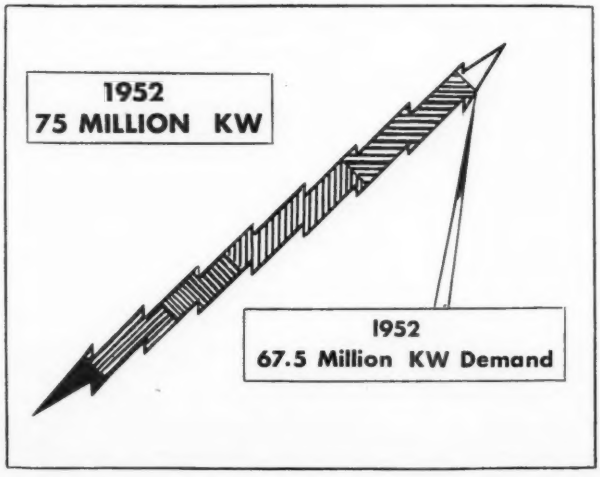


Fig. 6

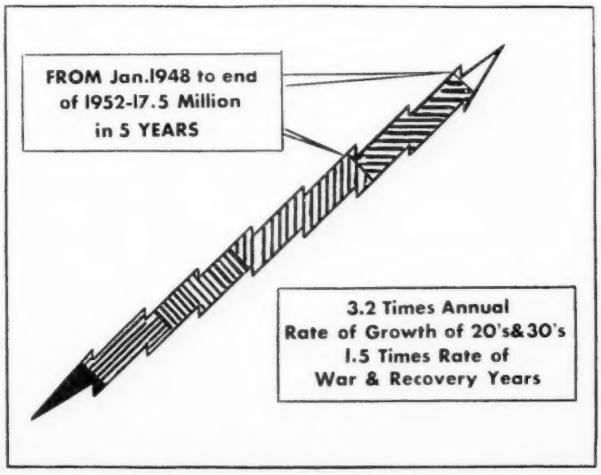


Fig. 7

the value of central station service than there was prior to the war.

The More Power To America Program features the exercise of *all* of the talents and services of *all* the parties interested in developing, on a long-term basis, that standard of industrial electrification which is essential to the welfare of our country.

This job cannot be done on a shoestring operating budget. There are a few figures we were able to dig out of some statistics furnished by the utilities of the country a few years back that throw light on this phase of your business.

First, let us look at Fig. 8, showing 1.6 cents per dollar of gross sales spent in total for sales promotion; and let us also recognize that with their appreciation of and opportunities for color and glamour, it is a safe bet that the residential and commercial lighting groups represented the lion's share of that combined expense. Contrast the figures shown on this chart with some other phases of private business. In the motor vehicle industry the value was 5.25 cents per dollar of sales; cigarettes 15.9 cents; malt beverages 23.7; bakery products 26.9.

Competing for Consumer's Dollar

True, in the electrical industry we are not directly in competition; yet we are from the angle of competing for the consumer's dollar.

Fig. 8 shows a downward trend from 1936 to 1944. We do not have the earlier figures, so we cannot assume that that was a continuation of the same share for a number of years back. However, with the tremendous job to be done in the next five years of over 3 times the average annual growth during that downward trend, we are safe in assuming that the upward trend from 1944 to 1946 should not be stopped.

We stand ready to do our part as an ally in assisting you to multiply your manpower through utilization of sales training and sales development programs so applied as to do this creative promotional job on a mass-selling basis instead of the more expensive and time-consuming individual customer basis.

Messrs. Ely, Hawley, and Wagner, in "LOAD" magazine have clearly set forth the position of the industrial power sales engineer in this coming new electric power sales era. His activities carefully supplemented and coordinated with those allied in this effort, present the best way to effective results.

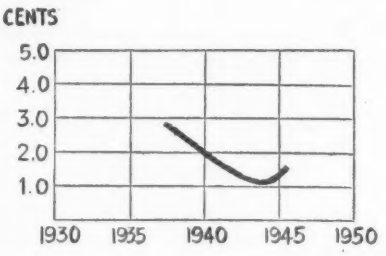


Fig. 8—Sales Promotion Expense Per Dollar of Direct Revenue.

Speaking of "LOAD," I want to express my appreciation for the cooperation that we have received from you in interpreting that plank in our platform which said we would provide a magazine for the dissemination of information of value to the power sales engineer, and we ask for a continuation of the same kind of contributory cooperation. It is our aim in this magazine to have it contain sales ideas, methods for handling particular types of new loads, new product developments, application ideas, etc. We have had our problems in building "LOAD," largely of the same kind we have had in fulfilling Plank No. 1—more help from G. E. sales engineers—but we have gotten ourselves an editor full time, Cliff Walter, who stands ready to help in the preparation of articles and gathering of information, etc., to continue the high standard we feel has been accomplished. We appreciate the acceptance the magazine has had at your hands.

Cliff Walter brought back from the Missouri Valley Power Exchange Meeting at Kansas City recently, this little story:

The Oklahoma Gas and Electric Company had a problem of distribution in oil fields and it was giving the individual involved some considerable trouble. He anticipated days of work. At a critical moment a new issue of "LOAD" was placed on his desk, and he found the answer right there.

You will be interested to know that since the date of introduction, 392 allies have purchased 966 programs. There are 340 programs in the hands of 110 utility companies. If time permitted, we could give you many instances of successful operation of the programs. To date we have completed the preparation of 11 topics in the industrial series and 4 in the farm electrification group.

We have come a long way in a few years from our original two black and white slide sound films to the full-color sound motion pictures and their complete application manuals of today. The manuals on the oil field electrification program, resistance welding, and modern power distribution have been pronounced classic text books in their field. Our newest one, "Materials Handling" has not yet been brought to the attention of all of you.

The development of additional topics continues. From the beginning to the date they become ready for distribution, each requires an average preparation period of eighteen months of hard work with plenty of sweat. When each topic reaches a certain stage, we seek a utility liaison representative to be certain that each topic is suitably developed from an industrial power sales viewpoint.

Urban Transit

In the field of competition, attention over the years was centered on the sale of power to the establishments with isolated plants; competition in the form of 46,000 isolated power plants running around on wheels, snared away 41 millions in gross revenue. This was when many communities became the victims of a fallacious philosophy. But, just as you battled before to demonstrate the proper and economic application of electricity in industry, we predict that in the community interest, you will focus your attention once more on the problem of electricity's job in urban transit.

To sum up, this is what M.P.A. means:

First, you have 3 times the job to do each year in the next five years that you had each year in the two decades 1920-1940.

Second, it is obvious it will take organization, time and money.

Third, you have better tools with which to do it.

Fourth, through cooperation with your real allies, the machinery manufacturers, electrical manufacturers, consulting engineers, contractors—all interested in the same ultimate goal—you won't have to do it alone.

Let's go and make full use of our coordinated efforts in making America a better place to live while we all benefit.

Three Sound Approaches to Good Customer Relations

By John C. Faris

Manager, Customer Business Department, Union Electric Company of Missouri

Excerpts from a paper presented before the Accounting Conference of the Southeastern Electric Exchange

THE *first* approach to good customer relations is a careful review of operating policies, routines and procedures. Revise, streamline, eliminate, and modify wherever possible to make it easier and more pleasant for the customer to do business with the company. *Don't be afraid to change!*

"Why Are We Doing It This Way?"

Let's examine each of these practices and routines, and ask ourselves "Why are we doing it this way? Isn't there a better method which will please the customer, and maybe make our own job simpler, too?" I would like to suggest some specific examples.

Many utilities still require each residential customer to "sign on the dotted line" when applying for service. Furthermore, some forms include 10 or 15 items of information to establish credit. Why? Because it has always been done that way? How much simpler merely to get the name of the customer, what he does, where he works, and how long he has worked there. This information alone will eliminate most good credit risks from further bother. Doubtful cases can always be followed up afterwards for security if necessary. Or, more convenient still, leave the electric service connected so the customer can start using it the day he moves in. A post card tag on the meter or doorknob which he can fill out and mail in to the office will serve to open his account.

Surety deposit policies vary widely between companies, and to some extent with good reason. Reams have been written and thousands of words spoken on this subject, and I will touch upon it only briefly. Barring regulatory requirements, let me suggest that we give the customer the benefit of doubt in all borderline cases. Thus you save him not only inconvenience and possible embarrassment, but you save the company the annual interest and the bookkeeping expense that goes on and on as long as the deposit is on your books.

Make it easy for customers to do business with you. If you have old-fashioned counters where they crowd around in droves on busy days, why not provide desks for the service clerks so each customer can be waited on in comfort and in privacy? Treat him as an individual—not as a sheep, or a goat.

How many focal points in your main office furnish information in reply to customers' inquiries and complaints? Does the customer have to be shunted around from one place to another, until he finally gives up in disgust? Or is it possible to centralize and furnish "one-spot, one-shot" service? It may be hard to change, but you can be sure that the customer will like it!

Customer Research Survey

One of the techniques which may be used to supplement your own ingenuity and judgment is a customer research survey. Why not find out what people really think of the way you are running the business, by asking them? There are many ways in which that may be done, varying all the way from two-way post cards or a few hundred telephone calls to personal interviews with thousands each year. Some companies use their own employees. Others contract the work to outside experts. The cost may vary from $100 to $20,000 a year. But the sampling of customer sentiment can be a very useful tool, substituting accurate knowledge for personal opinion and guesswork in our efforts to keep the friendship of our customers, and to win the friendship of the people new to our lines.

The *second* approach to maintaining good customer relations is: *Tell people why!* People will accept almost anything reasonable if they understand the reason. Stockholder reports, for example, have long been highly technical documents usually prepared by accountants, for accountants. Their presentation to the public has too often been by the interpretation of the local newspapers. Enlightenment has finally reached our industry, and more and more annual reports have become readable and even interesting. Many utilities are now slanting their reports toward the layman; they are mailing each company employee a personal copy, frequently with a letter from the president; and they are placing copies in the hands of the newspaper editors and other community business leaders. This isn't propaganda—it is giving out facts firsthand!

Being frank with the press is another excellent medium for "telling people why." Newspapermen make a living based on circulation; circulation is built up by news of interest to the greatest number of people; and news about the utility is news to everyone because we serve everyone. Therefore if news about the utility is about to break—good or bad—why not call in the press and tell them firsthand? The most militant newspaper might well be favorably impressed with the honest policy of laying our cards on the table, keeping them currently informed instead of making them dig up the news from other sources. And when second-hand news is garbled, it is seldom to the company's benefit.

"Tell the Customer Why"

Another facet of this approach is to *tell the customer why* whenever you make any noticeable change in operating policies or procedures. When you reroute your meter readers you may

change their discount dates; you may eliminate discounts altogether; or you may alter the whole appearance of the bill form. People get used to things being done in a certain way. They notice changes quickly, and their first thought is "How come?" If we tell them *why*, they will not only accept the change more readily, but will appreciate our having thought enough of them to tell them about it in the first place.

As a specific example of this technique, about a year ago our own company discontinued collecting payment of delinquent accounts at customers' premises. We found by careful analysis and field surveys that over half of the people we called on were paying their bills to collectors through force of habit. No widespread publicity was given the change in policy because less than 2 per cent of our total customers were affected. But every first call made on customers thereafter was to explain in detail the reasons why all delinquent bills must be paid to a company office in person or by mail. Adequate extensions were granted for customers to adjust their paying habits. Every customer service employee was thoroughly indoctrinated to explain the change to any customer affected by it. The result has been gratifying beyond all expectations, for not only has there been no adverse reaction, but people actually seem to have more respect for the company under the present policy because it represents a sound business practice.

I could also cite instances where we didn't explain the "why" of certain changes, and the resultant backfire was definitely unpleasant. But if "telling the people why" is a sound policy, it may be simply summed up as the display of "corporate good manners."

The Third Approach

The *third* approach to maintaining good customer relations is to have a loyal and enthusiastic personnel who realizes that rendering public service entails an obligation to that same public. This is perhaps the most difficult of all to accomplish. It may sound idealistic, but is it?

If the ideal at first seems unattainable, let's ask ourselves a few questions. How close is the liaison between top company executives and department heads? How frequently—or how seldom—does the individual department head take his division and group supervisors into his confidence? How often do the group supervisors meet and discuss common problems? What do they know about one another's work, or do they care? How do they feel about their jobs—are they really a part of management? Finally and most important of all, how many rank-and-file employees realize the importance of their work to the welfare of the company and thereby to themselves?

Good Human Relations

Here is where the fundamentals of good human relations may be applied to the broadest base. Every person likes to be treated as a human being and not as a piece of machinery. They like their accomplishments to be recognized, no matter how small the part they play. It is this recognition that pays the biggest dividends—to themselves and to the company.

The mistakes we have made in practicing the art of good human relations are tragic. If the average employee on the firing line is not interested in his job nor happy in his work, maybe it's our fault and not his. But there is a remedy, and that remedy is training.

Just how high up this training should start is beyond my province. In some cases, I suspect, it might well start right at the top of the organizational chart. But I will confine my comments to the grass roots.

This training does not apply to the details of a particular job, for there are many and varied methods of good and proven job training. What I am talking about is teaching our people the simple fundamentals of getting along with other people.

What are these fundamentals? Be courteous. Listen carefully. Don't interrupt. Be patient. Be considerate. Be sincere. Smile, don't frown. Don't argue. Have respect for the other fellow's viewpoint. Control your own emotions. Be friendly. Summing up these and all the others, it's simply the *Golden Rule*.

You may quickly say, "Why, anybody knows those things!" Ah, yes, but do they *use* them?

We should recognize that the employees on our payrolls, and the new employees we hire, have many different types of personality. Each of them today is the result of a combination of differences in heredity, environment, education, experience and many other factors. Each of them today is beset by differing degrees of worry according to their state of health, domestic life, and financial status. Can we then expect them to practice uniformly even the barest fundamentals of good human relations? Of course not! It is up to us to show them the way.

The first thing we should do is to show the new employee the part his job plays in the company as a whole. Many utility companies have now adopted very complete indoctrination programs. To let a new employee know that he is one of a team, and not just a cog in a machine, is bound to create interest in his work.

Various types of supplemental training programs can be used for both new and old employees, to encourage each of them to profit by getting along with their fellow workers; to get along with his supervisor; and for the supervisor to get along with each worker. Such a training program can be extended to encourage every employee to practice the art of good human relations in all dealings with customers. Here is the point at which teaching the employee to be *wisely selfish* can really pay dividends.

In most utility companies, the number of contacts between meter readers, tellers, service clerks, fitters, linemen, sales clerks and others will average 5 or 6 per customer annually. This means there are 5 or 6 opportunities each year for the average customer to receive an impression—good, bad or indifferent—of the company. The most effective impression is made by the treatment he or she receives from the utility employee, whether in person, over the telephone or by mail. After all, your corporation itself is an intangible thing, which nobody can see or hear. Each employee is a representative of the company, and the key to good customer relations is the manner in which customer reaction may be influenced by the attitude of our employees.

"Selling" Customer Relations

Such a program will not be automatically accepted; it must be "sold" to the individual employees. The best selling approach for any product is from a selfish viewpoint. The tie-in is that continued growth of our companies depends upon people using more of the service we sell; and since people buy more from those whom

(*Continued on page* 292)

Employee Performance Rating for Accounting Department and Other Office Employees

By E. R. Eberle

Chairman, A.G.A. Accounting Employee Relations Committee—Public Service Electric and Gas Co., Newark, N. J.

and J. E. King

Chairman, E.E.I. Employee Relations Committee—Consolidated Edison Company of New York, Inc., New York, N. Y.

SUPERVISORS are constantly required to rate employees whenever a merit increase, promotion, transfer, change in work assignment or discontinuance is involved. If this rating is performed on an informal basis, it involves simply a series of mental comparisons of one employee with another by the supervisor. Such informal rating requires that management rely fully upon the supervisor's ability to formulate sound opinions of relative over-all worth of individual employees.

Employee Rating—Formal vs. Informal Methods

Informal rating, lacking specific records of job performance and ability, can be subject to distorted weighting, to bias and to favoritism. Furthermore, when the group of employees, to be rated by one supervisor, is large, individual ratings can frequently be incomplete in scope and may tend to be based upon events which have occurred in the recent past.

In view of these facts it would appear that the accuracy of informal employee rating is largely dependent upon the ability, fairness, experience and sound judgment of the supervisor. If this premise were to be accepted without reservation, a solution to the problem might lie merely in careful selection and thorough training of supervisors.

Informal rating, however, poses very practical problems that do not readily lend themselves to satisfactory solution simply through careful selection and thorough training of supervisors. In the first place, without information systematically and regularly collected, and reviewed periodically with the employee, it is difficult for a supervisor to be consistently fair except where the number of employees may be very small. Secondly, and of particular importance, it is impossible for him to demonstrate that he has been fair, and consistent in rating all employees.

Because informal plans do not provide employees with specific or clearly defined standards of performance, the efficiency and morale of employees may be subject to wide fluctuations, depending upon how the "wind" of supervisory rating may be "blowing" at a given time. Suspicions of favoritism and inevitable disappointments, despite a supervisor's best efforts to be fair and to use good judgment, are certain to have an adverse influence upon employee relations in the department.

Many companies in the utility industry, and in general industry, have recognized the need for proper employee evaluation techniques. They have accordingly developed and put into effect formal performance rating plans. The experience of these companies has demonstrated that such formal plans can materially aid the supervisor in rendering consistent and impartial judgments regarding the relative worth of individual employees.

Objectives of Report

This paper has been prepared with the following objectives in view:

1. To analyze the peculiar needs for performance rating of accounting and other office employees.
2. To outline the prerequisites of successful rating plans.
3. To describe and weigh the various types of rating plans in use.
4. To outline a method of developing a rating plan.
5. To consider the factors involved in the administration of rating plans.
6. To make available detail information concerning some typical plans now being successfully used by companies in the industry.

Source of Material for Report

The main source of material for this report has been the information provided by members of the committee concerning the experience of their own and other companies in the use of rating plans. Published information contained in written material on the general subject of performance rating has been studied in pursuing background research for the report and has been drawn upon as needed.

References and suggestions for further study by interested companies are listed in the bibliography.†

A formalized performance rating procedure, carefully designed and administered, can provide a sound foundation upon which to build a proper relationship between the supervisor and the employees under his direction. This relationship must be founded upon a thorough appraisal of the performance characteristics and ability of

† Bibliography available on request from E.E.I., 420 Lexington Ave., N. Y. 17, N. Y.

the employee on the part of the supervisor. It likewise must be founded upon a feeling of confidence, on the part of the employees, in the supervisor's methods of evaluation and in his impartiality in application of such evaluation. It is fundamental that this dual relationship be recognized in order that the basic need for formalized performance rating of employees be fully appreciated.

The potential value of a sound rating plan, in fostering a higher level of teamwork and employee morale, has frequently been given but scant recognition. However, this has been one of the outstanding results reported by companies that have developed and used such plans over a period of time.

In rating employees, and in subsequent discussions of the ratings with individual employees, the supervisor is made to realize the importance of an objective approach, and of being able to substantiate general rating statements and to illustrate various trait ratings with specific examples. He will readily recognize his own shortcomings and the inadequacy of informal rating methods, which permit opinions to be formed from chance or casual impressions.

Through the use of a formalized rating plan, uniform and individual consideration is accorded each employee. The impact of a consistent and fair plan of individual appraisal upon over-all employee morale will be readily apparent. This favorable influence will not be transient but will serve to develop a continuing undercurrent of mutual interest and trust.

A collateral purpose, that performance rating can serve, lies in the area of supervisory training. Some companies have considered this purpose to be of major importance. The rating plan is a tool which will assist the supervisor materially in personnel administration. In using this tool the supervisor will be training himself in a systematic technique. He will perform the necessary rating and discussion functions involved in the plan, and in so doing, will be made to understand and assume better his supervisory responsibilities as they relate to this phase of employee relations.

Specific Uses of Performance Ratings

The particular value of formalized rating plans lies in the fact that they provide a uniform and systematic plan for recording judgments of performance and ability of each employee over a period of time, and *in advance* of the need to make decisions or to take action. A catalogue of judgments of performance and ability, prepared and maintained currently, is of value to the supervisor specifically in connection with important functions of personnel administration.

It will insure that the supervisor will recognize progress made by employees over periods of time and it will provide information concerning the various traits of performance which warrant commendation.

Correction and Training of Employees

It will provide the supervisor with a record of progress of employees over a period of time and will indicate specific traits needing correction or improvement. With this information available the supervisor will be able most effectively to devise and apply necessary corrective training, and to suggest methods of improvement to individual employees.

It will aid in sound appraisal of the worth and potential ability of new employees. The evaluation it provides will serve as a factual basis for determining whether the new employee should be retained.

It will provide specific information for use in connection with the granting of merit salary increases. Such information will be pertinent in determining whether an employee merits an increase, and if so, how much.

In those cases where salary increases are administered under a plan of job evaluation with "automatic" or "semi-automatic" progression increases, it will enable the supervisor to determine whether progression increases should be withheld for cause.

Selection of Employees for Promotion or Transfer

It will enable the company to develop and pursue a sound promotion policy. Promotions should be used fairly by management to fill positions in the organization with the most capable and productive employees available. This type of promotion policy will obtain acceptance by employees only if management can establish confidence in the fairness of its methods for selecting the employees to be promoted.

The formalized rating plan will provide the supervisor with the records and factual information necessary to evaluate employees on a uniform basis and to make fair selections based upon ability.

In companies having union agreements the questions of seniority versus ability in promotions frequently involves two main issues. The first is whether the company can or should pursue its traditional policy of promoting outstanding employees without regard to seniority. The second involves the question of whether a seniority formula, once established, shall operate in such a fashion that the company is obliged to promote employees who are not best qualified.

In cases where promotion is not on a straight seniority basis, the supervisor will need sound factual data to substantiate his selection. Typical union promotional clauses, of the seniority formula type, are similar to the following, "Where ability and qualifications are reasonably equal, seniority shall prevail in promotions." The problem of determining and *proving* that "ability and qualifications" are or are not "reasonably equal" is, as many companies have learned, not a simple task.

A formalized performance rating plan will serve two main purposes in this connection:

1. It will provide an objective, uniform and systematic basis for analyzing relative abilities and qualifications of employees.

2. It will be of value in demonstrating to the union, management's sincerity in endeavoring to make fair and unbiased evaluations of employees.

Selection of employees for transfer can likewise be made on the basis of qualifications of employees, as they may relate to the transfer, if a formalized rating plan is used by the supervisor.

It will enable supervisors to determine properly what employees should be downgraded and why.

In connection with layoff of employees, unless such layoff is governed by a seniority rule, it will enable the supervisor to select for layoff those employees whose performance has been least satisfactory.

Suspension or Discharge of Employees

It will provide a complete progressive case history of employee performance, and of discussions by the supervisor with the employee, and warnings as to the necessity for improvement, over a period of time. This

record will serve as background information and reinforcement for the supervisor's ultimate decision to suspend or discharge an employee for cause, related to work performance involving serious carelessness, wastage, spoilage and the like.

All of the aforementioned uses and applications of a formal rating plan clearly highlight the urgent need existing today for a systematic, objective and unbiased method of judging the relative competency of individual employees. They all likewise illustrate the need for factual data to support and sustain management decisions.

The supervisor is entitled to and should be provided with a formal rating procedure that has been carefully developed as an essential tool in enabling him to satisfactorily discharge these basic personnel administration functions.

Prerequisites to a Successful Rating Plan

No rating plan will be successful unless the value of the rating program is thoroughly sold to your top accounting management, supervisors and employees. Your chief accounting officer must be more than passively interested in the installation and operation of the rating program. Your supervisors must consider the program more than "some more paper work." Your rank and file employees should be sold that the program is one in their interest.

It is not easy for anyone to accept a program unless he understands its need and purpose. The top accounting executive, therefore, should give his wholehearted support even to the extent of becoming the group conference leader if possible when the details of the program are being discussed. He should be an active member of an advisory committee composed of your accounting executives to give general supervision to formulation and installation of the plan.

Supervisors must understand the need and purpose of the program. Usually, it is the immediate supervisor who rates his employees. If he isn't sold on the plan in operation, the plan will not be effective. There must be faith on the part of the supervisor that the plan is going to help him do a better job of supervision. To acquire this faith, the supervisor should be brought into the formulation and installation of the program.

The degree of success of a rating program also depends upon the support of the employees themselves—those workers who are to be rated. This may be the most difficult step in the selling procedure. Some companies are unionized. Management should discuss and sell the plan to the employees' representatives, take advantage of constructive suggestions from the union, and within reason, make whatever modifications are necessary to attain complete union acceptance.

There is no such thing as the one best type of rating plan. As the National Industrial Conference Board has expressed it, those rating plans that have been most successful "have been tailor-made to suit the particular conditions, jobs and objectives of the organization in which they were to be used."* Accordingly, the thought and skill expended on the development of the rating form itself is important. If accurate, uniform information is to be secured, the form must be well designed. The traits which are selected must represent those qualities which are considered to be the most important in the employee's job performance. These traits may differ for each job because of the aspect of what is considered "most important." It is self-evident that some "most important" traits in a public contact job may not be most important in a non-public contact job. You and your accounting management are the sole judges as to what traits should be specified for your accounting office jobs. In other words, tailor-make your plans to fit your own company's jobs.

Number of Traits

The number of traits which will be used for each job is also important. Too many traits lead to confusion and non-uniformity in rating. Analyses of rating plans show preference for the use of from five to ten or twelve at the most.

The traits selected to appear on the rating form should include some involving personal characteristics, such as, "attitude," "personal habits," "personality" and the like. Objective work performance traits naturally will be selected. Each trait should be subdivided into degrees of evaluation. The method of doing this is described later under the "Development of a Rating Plan."

Care must be exercised in wording definitions so that uniform interpretation will be secured. If you use the word "average," you may have an altogether different idea of what relative evaluation it connotes than that which someone else has in mind. In the definitions of the traits themselves, overlapping must be avoided. Each trait should be as distinct from the other as possible.

The instructions or directions which accompany the rating form should be clear, specific and detailed. If, for example, two supervisors rate a cashier, each supervisor should mean the same thing when he says the employee is rated "Excellent." When two supervisors give a meter reader a point rating of 85, each supervisor should mean the same thing. In short, there should be a stable relationship uniformly interpreted by all raters.

Another "must" in order to have a successful plan is to have well trained supervisors. They should not only be trained initially, but should receive periodic training instruction.

If detailed attention is given to all the prerequisites mentioned, you will be on the right road to evolving a successful rating program.

Types of Rating Plans

Rating plans may be catalogued into four broad types; namely, ranking, man-to-man comparisons, check lists, and scales. While there are numerous modifications, any plan can be classified within four general types.

When a supervisor ranks his employees on an over-all basis, you have the elementary type of ranking as, for example, when an accounting supervisor ranks all his bookkeepers from the most satisfactory to least satisfactory. Usually, however, employees are ranked by traits; i.e. the supervisor determines which bookkeeper makes the least errors, which bookkeeper makes the most errors and which bookkeepers fall between these two extremes.

While there is a slight advantage in this type of rating over other types in that it does not necessitate comparing an employee's performance with a definition of "above average," "average" and "below average," there are some offsetting limitations. If the number of employees rated is large, it is usually most difficult for the supervisor

* National Industrial Conference Board, Studies in Personnel Policy, No. 39, 1942, "Employee Rating," p. 5.

to determine such fine differences between the traits in his employees. Furthermore, it becomes quite difficult to say whether John Jones, who was rated highest by Supervisor A, ranks higher, as high, or lower than Jim Smith, who was rated highest by Supervisor B. In other words, you cannot determine how much better one employee is than the other.

Another limitation to the ranking method of rating is the inability to determine how much separates the employees ranked in the middle from each other or even those ranked in the upper and lower extremes. Considered in the light of the purpose for which the ratings are used, it may frequently be impossible to demonstrate that the rating is fair.

Man-To-Man Comparison Method

Man-to-man comparisons are commonly referred to as the "Army rating scale." Under this method, your supervisor of key punch operators, for example, would select the key punch operator who exemplified the highest degree of the trait being considered—let's say "speed;" then he would select the operator exemplifying a high degree; then the operator exemplifying an average degree, low degree and finally the lowest degree of speed. He would assign values to each degree, as 15 for highest, 12 for high, 9 for average, 6 for low and 3 for lowest. The supervisor then would match each key punch operator against this scale and assign the numerical value of the individual on the scale whom the operator being rated most closely resembled. This process would be repeated for all the traits selected and a composite score arrived at by adding all the numerical values.

The main disadvantage in the use of man-to-man comparisons is the time-consuming element. It is burdensome to select a group of employees to be used as a criterion and it is as equally cumbersome to pair off each employee against the criterion. A second disadvantage is that the supervisor may run into much difficulty in attempting to select the employees to use in the scale, because the standards by which to measure are very general. This makes for confusion and lack of confidence in the scale. A third disadvantage is the fact that you, as the rating supervisor, may select an employee to represent the highest degree in the scale, while your fellow-supervisor may consider another employee of comparable ability to exemplify the middle degree in the scale. Under such conditions, one might not place too much confidence in the accuracy of the resulting ratings.

Check List Method

The simplest form of a check list method of rating is a list of questions or statements concerning important aspects of an employee's job performance. The supervisor checks "yes" or "no." While this method is not as arbitrary as the attempt to answer "yes" or "no" to the question "Have you stopped beating your wife?", it smacks of arbitrariness because all employees display traits in a varying degree. No employee is always one hundred per cent uncooperative; neither is every employee batting a thousand in being cooperative.

The more advanced form of a check list method of rating (which sometimes may be considered a simple scale type) is a series of statements which have been carefully phrased and assigned numerical values. For example, a service clerk in a district office might have the following statement checked:

1. Knows credit policy of company
2. Keeps work up to date
3. Knows company rate schedules
4. Cooperates effectively with customers

Each statement would have a numerical value and the supervisor, without knowing each value, would check the statements in a manner that would express his opinion of the degree of the accuracy of the statement. When the rating is completed, it is then scored in a central office.

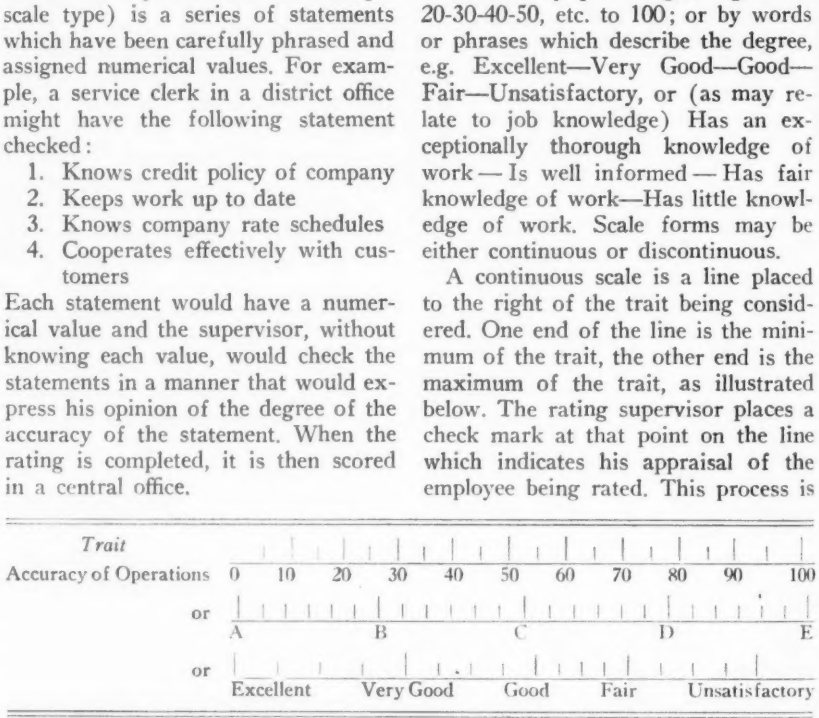
The disadvantage of the check list form of rating is to be found in the difficulty in developing an adequate list of questions or statements. A few questions or statements selected at random will not suffice. Much time and thought must be devoted to the preparation of an adequate check list.

One advantage of this type of rating is the facility afforded in comparing employees from different organizational units. Second, the supervisor does not evaluate work performance but he simply indicates the degree applicable to specific items of work behavior. Third, the corrective interview between supervisor and employee is made easier by the use of the check list than most other methods. Finally, the influence of the "halo effect," about which more will be said later, is reduced.

Scale Method

A widely used type of rating plan is the scale type. A scale rating plan is one in which a list of traits is developed, and in the use of which the supervisor indicates on a scale the degree to which the employee manifests each trait as it applies to his job performance. The degree of the trait shown by the employee may be expressed by letters of the alphabet, e.g. A-B-C-D-E; or by numerals, e.g. 2-4-6-8-10; or by percentages, e.g. 0-10-20-30-40-50, etc. to 100; or by words or phrases which describe the degree, e.g. Excellent—Very Good—Good—Fair—Unsatisfactory, or (as may relate to job knowledge) Has an exceptionally thorough knowledge of work — Is well informed — Has fair knowledge of work—Has little knowledge of work. Scale forms may be either continuous or discontinuous.

A continuous scale is a line placed to the right of the trait being considered. One end of the line is the minimum of the trait, the other end is the maximum of the trait, as illustrated below. The rating supervisor places a check mark at that point on the line which indicates his appraisal of the employee being rated. This process is repeated for each trait on the rating form.



A discontinuous scale or step scale as it is commonly known is a line placed to the right of the trait being considered, but instead of the rating supervisor placing a check mark on any particular point on the line, he is restricted to a small number of degrees and places the check mark un-

der a restrictive heading, such as Exceptional, Above Average, Average, Below Average, Unsatisfactory, as shown below.

Trait	Exceptional	Above Average	Average	Below Average	Unsatisfactory
Quantity of Work					

The discontinuous scale is more popular than the continuous scale because of a rating supervisor's inability to draw such a fine distinction between the degrees of a continuous scale. It is difficult to say that John Jones rates 23 on "cooperativeness" while Jim Smith rates only 22. It is not so difficult to form a rating judgment that both Jones and Smith are cooperative to a "fair" degree.

Discontinuous Scale

There are advantages to the discontinuous scale type of rating plan which the ranking or check list types do not have. First, the amount of time consumed is relatively small. Second, it requires less instruction for supervisors. Third, there is only one standard by which to make comparisons between workers of all kinds. Fourth, each employee can be rated without comparison with other employees. Fifth, the ratings can be easily scored.

Just as with an informal rating plan, a formalized plan of the scale type may introduce an effect based upon an over-all opinion, which should be watched closely. A rating supervisor unconsciously may allow one outstanding trait, either good or bad, to color his judgment to such an extent that if, for example, he rates an employee "Excellent" on this trait, he has a tendency to rate the employee "Excellent" on all traits. This condition is commonly known as the "halo effect" and may be considered one disadvantage in the scale type of rating plan. Another disadvantage is the tendency of rating supervisors to misinterpret definitions, especially when the scale rating form is intended to embrace varied kinds of work.

One modification of the scale type of rating is known as the "forced distribution" method.* To use this method, you would ask your supervisors to rate their employees on two characteristics only—(a) job performance and (b) promotability. Under this method, the distribution is forced in the very beginning instead of rating the employee first on all traits and then arriving at a distribution of the various ratings. Assume you have 100 meter readers to rate. The meter reading supervisor would allocate 10 men to the highest end of the scale, 20 men to the bracket next to the highest end, 10 men to the lowest end of the scale, 20 men to the bracket next to the lowest end, and 40 men to the middle bracket. All supervisors would use the 10-20-40-20-10 distribution. Then the meter reading supervisor would be required to show why, for example, he placed the 10 particular men in the lowest bracket. To substantiate his distribution, he would check therefore a list of characteristics printed on the back of the rating form. This method of rating may be found to be very practical because of its simplicity.

All the types of rating plans described can be used to evaluate employees' job performance in our accounting departments. Again, we repeat, each company must tailor-make its own plan to fit its own jobs.

Development of a Rating Plan

Man as a rational being usually knows why he does something. If he takes a train to a distant city, he has a reason, a purpose, an objective in mind, even if by a stretch of the imagination that purpose is "just for the ride." So, too, in the development of a rating plan, a purpose must be defined and always kept uppermost in mind while the plan is being developed. If you develop a rating plan without a conscious knowledge of its purpose, the plan is like a radio with defective tubes—either you don't get anything out of it at all or, if you do, the reception and results will be poor.

Purpose of Plan

It is not difficult to define the purpose of a rating plan. All you need do is ask yourself one question, "How shall I use it?" Let's see how you could use a rating plan. Do you want it simply as a corrective tool? Only for promotional purposes? To train employees? To answer an employee's question, seldom asked but always inferred, "How am I doing?" Only for granting or denying salary increases? Simply to train supervisors? Or do you want to use the rating plan to accomplish a combination of these objectives? You are the one to decide the purpose. When that is done, the task of laying the groundwork for selling the program to supervisors and employees will have been made less difficult. Moreover, the selection of the type of rating plan itself will depend upon the purpose for which the program is to be used. If the purpose of the plan is restrictive—for example, if the plan is to be used only to determine if a new employee should be retained in the company, a very simple check list would suffice. If, however, the purpose of the rating program is broad—for example, the plan is to be used as a basis for promotions, merit salary adjustments and service terminations, more than a simple check list is necessary to convince the employee (and maybe the union) that John Jones rather than Jim Smith should be management's choice in the present action. Here, a very adequate check list or scale type of plan is desirable, because either one lends itself to a more tangible relative employee evaluation.

As far as the name of the plan is concerned, there is a variety of names. A suggested list of titles for a program follows:

Employee Progress Report
Employee Rating
Employee Inventory
Employee Appraisal
Merit Rating
Personnel Inventory
Efficiency Rating
Service Rating
Experience Rating
Personal Rating
Individual Rating
Employee Evaluation

The name selected, however, should bear as close a descriptive relationship to the purpose of the plan as possible.

Selection of Traits

Now you are ready to select the traits by which to pass rating judgment on the employee. What will the traits be? The content of the job which the employee is performing and what you expect from and in an employee performing the job, should guide you in the selection of the traits to be rated. For example, you want

* Joseph Tiffin, "Rating and Training Executives and Employees," American Management Association, Personnel Series No. 100, p. 20.

to know something more about a clerk-typist, whose job it is to type and file customers' deposit data than merely the neatness of her work. You are also interested in her accuracy, quantity of production, cooperation and other job performance or personal traits. Thus, there should be enough traits selected to secure a sufficient number of different aspects of her work performance. As stated before, five to ten or twelve traits are usually sufficient in number to get the picture you desire.

The traits selected should have a close relationship to the actual work of the employee being rated—traits that the supervisor can observe. It would be absurd to rate a billing machine operator on the trait "Effectiveness of Contacts With the Public?" Similarly, wouldn't it be stretching a point to attempt to rate a bookkeeper, whose job does not require the use of machine equipment, on the trait, "Effectiveness in the Use of Machine Equipment?" The traits selected therefore should be sufficiently specific to evaluate the employee in the work performed. When, however, the rating program has a combination of purposes, the traits of necessity must cover a wide range. The narrower the purpose, the narrower the range.

The purpose for which the rating plan is to be used is the basis for trait selection. You wouldn't promote an employee to a supervisory level, even though he rated highest in quantity and quality of work, if he did not possess those personal traits which you insist a supervisor should have. The traits selected, therefore, always should have a cause and effect relationship.

Weighting of Traits

In the development of a rating plan, the next detail which warrants close scrutiny is the weight which is assigned to any particular trait. It appears self-evident that certain traits selected for rating an employee are more important or have greater significance than certain other traits also selected. The usual method of showing this difference is the assignment of different weights to the selected traits, in accordance with their importance or significance to the total job performance value. The telephone clerk who talks to the customer all day must have good hearing; a file clerk who is deaf still may perform very satisfactorily. It would be faulty weighting, therefore, to assign a weight of 25 to the trait of "good hearing" in both cases, when you know that the job of telephone clerk cannot be performed at all by an employee who does not possess good hearing, while at the same time the file clerk could be deaf and still perform the job properly.

The National Metal Trades Association used six traits, weighted as follows*:

	Percent
1—Quality of work	25
2—Quantity of work	20
3—Adaptability	15
4—Job knowledge	20
5—Dependability	10
6—Attitude	10
	100

Or weight factors may be established for each trait as follows*:

	Weight Factor
1—of primary importance to job	3
2—of secondary importance to job	2
3—of minor importance to job	1

Here, again, you are the best judge of whether or not weights should be assigned to traits, and if so, what weightings should be used. Advice from and discussion with your superiors concerning the weighting of traits is highly recommended. The rating supervisor knows the job content best; he knows what trait is more or less important to the doing of a good job by an employee. His counsel should be sought.

Caution should prevail, however, in the use of trait or total scores. Before such a statistical tool is used, a complete knowledge of the possible errors resulting therefrom should be ascertained from authoritative sources.

Subdivisions of Traits

The next consideration in the development of a rating plan is the determination of the number of divisions for each trait. Should there be only three divisions; as, Above Average—Average—Below Average? Should there be four divisions; as, Exceptional—Good—Usually Good—Sometimes Poor? Should there be five divisions; as, Excellent—Very Good—Good—Fair—Unsatisfactory (or A-B-C-D-E) or will a continuous scale as explained previously be your choice of plan? Once again, you are the judge of what you need. Four or five divisions, however, are considered by most companies to be the ideal number.

Definition of Traits

Whatever number of divisions is selected, it is most important that each division be defined and the definition be made available to the rating supervisor either in separate instruction sheets or on the rating form itself. This probably is the most difficult task in the development of a rating plan. To define what "average" means when considering the work performance of an accountant, bookkeeper, typist, routine clerk, cashier, adjuster, service clerk or billing machine operator, is almost as difficult as answering the question, "How far is 'up'?" The main point to remember, however, is not so much as to why a certain standard is defined as "average" as the *uniform* use of the definition by all rating supervisors once it has been set. The phrases and words you use to convey a thought to the supervisor's mind should be simple, exclude ambiguity, and mean the same thing to everybody. Otherwise, the plan may be justly criticized from the point of view of overlapping definitions. Probably the best definitions to be used in connection with the traits or subdivisions in a rating plan are those explained by means of sentences or paragraphs; e.g. "Consider attitude toward work and amount of supervision needed to keep him on the job until completed" is better than the expression, "Dependability." Similarly, the two statements, "Needs constant supervision" and "Applies himself well—occasional supervision required" give the rater a firmer grasp of what you want various degrees of "Dependability" to mean than if you used the words "Poor" and "Above Average" respectively. In the case cited, it is not infrequent that some companies want attendance to be part of the definition of "dependability" while other companies which have a formula for promotion in their union contracts listing "attendance" as one of the items for separate consideration, only want "dependability" to mean, "Does he stick to his work?" thereby excluding at-

* Smyth and Murphy, Job Evaluation and Employee Rating—McGraw-Hill, New York 1946, p. 214.

tendance from the trait definition. Whichever definition is decided upon, it makes little difference as long as all supervisors know what "dependability" includes and excludes. For further examples of definitions of traits and subdivisions, a close study should be made of the rating plans shown in Appendix.*

Training of Rating Supervisors

Now that the traits are selected, weighted and definitions set up, the next step is one of training the rating supervisors in the techniques of rating. It is true that all supervisors get a certain amount of training when they take an active part in the formulation of a rating program, such as determining the purpose of the plan, the jobs in which employees are to be rated, the traits, subdivisions and so on. But more than this is necessary in order that the program be successful as it relates to the making of fair and equitable ratings and the proper use of these ratings once they are made. Two methods of training can be used. The first, namely, the personal contact method, is effective from the point of view that the rating supervisor can ask the trainer all the questions which come to his mind as a result of reading or hearing training techniques explained. The personal contact method can be either between the trainer and one supervisor or between the trainer and a group of supervisors. A rating instruction manual can supplement the personal contact method with more effectiveness than if it were used alone as the second method of training.

Training must also be given to the rating supervisor on how to use the ratings, for it is he who will make use of them. Again, the personal contact method can be used. The trainer can sit down with the supervisor and discuss the principles of rating reviews, how to determine the importance of the ratings, how to hold a corrective interview with the rated employee and how to help the poor performance employee become a good performer.

Scoring

The next step in the development of a rating plan is the determination of how the ratings will be scored or whether they shall be scored at all. As stated before, numerical scores should be used with caution. Much has been written in an attempt to discredit the value of numerical point scoring. On the other hand, many companies feel that numerical scoring can be used adequately to compare employee performance.

The first method of scoring is called Over-All Scores, which is the sum of the scores on the individual traits. Numerical scores, however, may be legitimately criticized as not representing objective value. There is no discriminating difference between an over-all rating of 83 and one of 86. Both employees are relatively satisfactory. However, if certain groupings of scores are established, the numerical over-all score can mean something more objective. A typical grouping might be:

General Rating	*Total Score*
A	90—100
B	80— 89
C	70— 79
D	60— 69
E	Below 60

In the use of the grouping method, an 83 and an 86 rating do not earmark the employees with measurement precision but do catalogue both employees within the same group.

Another method of numerical scoring is trait scores. Due to the ease with which over-all scoring may average out differences in important traits, it may be desirable to use single trait scores, which has the advantage of comparing employee ratings by individual traits. For example, two meter readers might be given the same over-all score of 85, but if you are interested only in "quantity" of production, the trait scoring method will give you the relative rating of the two employees on "quantity" alone, e.g. one may be rated 30; the other, 15. The over-all scoring method would be misleading. Here, again, the grouping method may be employed so as to avoid the inference that exact measurement can be determined.

Some rating plans make no provision for scoring. The authors of such plans do not think it wise or even possible to evaluate human beings in the same way that you would say two plus two equals four. While these plans are not as readily adaptable for such purposes as promotions, demotions, salary increases and service terminations as are plans which provide for scoring, the "no-scoring" plan is particularly applicable where the one purpose of the rating is to provide a basis for the corrective interview with the employee.

Additional Information

Certain other information for purposes of identification which may be shown on the rating form follows:

Employee's name and number
Department or unit
Title or occupation
Date of rating and period covered
Name and title of rating supervisor
Name and title of review supervisor

In addition, it may be desirable to ask certain specific questions on the rating forms, such as:

1. Does he stop work before quitting time?
2. Does he leave his job without permission?
3. Does he complain about the company or its policies?
4. Does he make practical suggestions?
5. Has any disciplinary action been applied to him since last rating?
6. Are you satisfied that he should be retained in the company?
7. Is employee a square peg in a round hole?
8. Should he be promoted, demoted, transferred, released?

The disadvantage of including such questions is that it makes the rating supervisor feel he has to write too much and sometimes he does it reluctantly. The advantage is the fact that the supervisor must think about the rating of each employee in a systematic manner.

Rating Form

Now a word or two about the form on which the rating is made. You make your own form to fit your own needs and requirements. The form should be as simple as the purpose for which the plan is to be used will permit. Complex forms tend to confuse rating supervisors. The form is not an end in itself; the end or objective is what is on the form in terms of job performance evaluation. The form itself is simply a tool—a means toward an end. After it is pre-tested with a group of rating supervisors, the results obtained should be analyzed. Suggestions should be reviewed critic-

* Appendix, showing various forms used by gas and electric companies, can be obtained by writing to the E.E.I., 420 Lexington Ave., N. Y. 17, N. Y.

ally and the form revised if necessary. This should be a continuing process as long as the rating plan exists.*

Validity and Reliability

Now that the rating plan has been developed and ready for use, you may lean back in your chair and ask, "When the ratings of my employees are made, how can I know that they actually measure their job performance?" or "Do the ratings measure the job performance consistently?" In other words, you become dubious about the validity of the plan itself and the reliability of the individual ratings. This is as it should be. Why? Because there may be a supervisor who thinks his own job so important that (in his words) he couldn't have any employees who weren't all top-notchers. Another supervisor may want to justify his recommendations for salary adjustments; hence, of course, his employees are all "excellent."

If such conditions exist and are allowed to exist, your doubts about the validity of the ratings will soon be substantiated. So some tests of validity will have to be made.

There are many statistical tests of rating validity. The main objection to many of them is the complicated formulae and statistical techniques which must be used. However, some of the more simple tests of validity are:

1. Compare rating with an objective measure; e.g. number of bills machined or number of coupons sorted. Where such criterion is not available, this method naturally cannot be used.
2. Observe certain groups of employees in their future progress to determine if a correlation exists. The objectional feature of this method is the length of time it takes.

Even after you have tried out all of the statistical methods available, you may still want to fall back on your own logical validity test; namely, (1) "Are the traits and weightings reasonably selected?" (2) "Was plain common sense used in their selection?" From a practical point of view, if these two principles have been verified, your rating plan cannot be too invalid for practical use.

What about the reliability of ratings! One test of reliability is the agreement between a number of independent raters. If several supervisors rate an employee and agree in general as to the degree of a particular trait this employee manifests, the results would indicate reasonable reliability.

Another test of rating reliability is the process whereby one half of the traits are compared with the other half and a correlation made between them.

Many of the references listed in the bibliography† are sources for more detailed study of rating validity and reliability. In the final analysis—". . . it appears that while there are numerous ways of determining approximately what any group of ratings measures and how consistent the measurements are, no one has yet discovered a single method or combination of methods which will justify a categorical statement that 'ratings are entirely valid' or 'ratings are entirely reliable.' In other words, it seems to be impossible to prove that they are mathematically accurate measures of performance, of potentialities or of personal qualities. In this they may be compared to psychological tests. The implications of this fact are plain: ratings are considered opinions only, and should be applied as such. Even though it can be demonstrated . . . that they are reasonably valid and reliable, their primary function should be to substantiate other information and to indicate trends. They supplement, but cannot take the place of production records or other more concrete means of measurement."*

Common Rating Pitfalls—"Halo Effect"

Perhaps one of the most frequent problems confronted in rating plans is that of eliminating the "halo effect" which was mentioned previously. Some rating plans attempt to eliminate or minimize this failing by insisting that the rating supervisor rate all employees on one trait—the same trait—before considering any other trait. Other plans provide for the lowest degree of the scale at the left of the scale for trait number 1 and the highest degree of the scale at the left of the scale for trait number 2; then alternately for the remaining traits. Still other plans may vary the location of the degrees of the scale in such a way that the rating supervisor must concentrate on each trait in order to check the proper degree, because the highest, lowest and intermediate degrees appear at different positions on the scale line for each trait.

Central Tendency

Another pitfall of rating is to catalogue unjustifiably too many employees as "average." This failing is commonly referred to as "central tendency." Two simple methods of controlling this failing are available:

1. Use an even number of subdivisions, thereby not permitting a mid-point, e.g. Excellent—Good—Fair—Poor.
2. Use descriptive phrases in such a way that it requires more thinking by the rater to distinguish between the subdivisions.

Finally, the tendency on the part of the supervisor to be lenient or severe in his ratings is a weakness which should be corrected. On the one hand, the human element is pronounced. No supervisor likes to deflate his friend or associate with whom he has worked for years. So, he doesn't; he's lenient and gives a rating too high for the performance at hand. On the other hand, a supervisor who takes the position that no employee is ever "excellent" may be arbitrarily severe. Both these failings can be corrected through proper training in rating technique.

The aforementioned pitfalls should be guarded against at all times. If this is done, there will be reasonable assurance that the ratings, in this respect, will produce a reasonably reliable picture of employee performance.

The experiences of the companies that have been studied all point to the conclusion that the ultimate success of an employee performance rating plan, regardless of its mechanical make-up, is largely dependent upon its proper administration. In general, proper administration contemplates the preparation of equitable ratings at the required time intervals and utilization of such ratings in a prescribed manner.

The administration of the plan is ultimately a line responsibility and function. The elements of administration involve two somewhat different areas of consideration:

* An Appendix, showing various forms used by gas and electric companies, can be obtained by writing to the E.E.I., 420 Lexington Ave., N. Y. 17, N. Y.

† Bibliography available on request from E.E.I., 420 Lexington Ave., N. Y. 17, N. Y.

* National Industrial Conference Board Studies in Personnel Policy, No. 39, "Employee Rating." Page 26, 1942.

1. Basic administrative requirements for the successful application of any type of plan.

2. Individual decisions as to methods of use and application of a predetermined plan, by a company, to fit a particular set of conditions.

Basic Administrative Requirements

A. The plan must have the full support of the entire line organization as to its purpose and soundness. The supervisors or others who do the rating must be convinced of its value. It is also desirable that employees believe in the fairness of the plan.

B. The supervisors should be fully trained in the mechanics and use of the plan. The training should include practice in controlled test ratings. By this means and other methods previously described, the supervisor should be instructed in the proper operation and use of the rating method in order to insure maximum value of the plan to himself and to the employees.

C. The ratings should be honestly developed and used for the purposes for which they are intended. Improper preparation or use of the ratings will tend to undermine the employee's confidence in the integrity and fairness of the rater.

D. The ratings should be subject to review in order to insure uniformity and consistency of application by various raters and correct interpretation of definitions by individual raters. The question of the authority of the reviewing rater to alter the over-all rating in individual cases will have to be established. It would appear that, in general, his authority should be limited to the determination as to whether the proper method of application has been used. The supervisor who is more closely associated with the employee being rated is in the best position to determine correct individual trait appraisal, and as such, his rating should not be subject to arbitrary revision.

Decisions affecting the administration of the plan must be made with respect to:

A. *Who Shall Perform the Ratings and How Many Ratings Should There Be for Each Employee?* The main consideration in this determination is that the rater must know the employee through close association over a period of time so as to be able to rate him fairly on the various traits. Usually, the immediate supervisor is in the best position to rate the employees under his jurisdiction.

The number of ratings of an individual employee to be obtained at the same time by different raters will depend upon the departmental organization. If multiple ratings are feasible, as previously pointed out, they will serve to improve the reliability of the results.

B. *How Frequently Should Ratings Be Obtained?* Because of the fact that employee performance and ability is subject to change over periods of time, ratings should be made at periodic intervals.

In the determination of the frequency of ratings, it would seem desirable to treat new employees in a class apart from regular permanent employees. New employees may be considered on probation for specific periods of time depending upon company practice (commonly ranging from one month to six months). Since these employees are on trial, it would be reasonable to schedule rating of these employees at one or more intervals within the confines of the established probationary period.

Frequency for Permanent Employees

The frequency of rating permanent employees will be dependent upon individual requirements of the company. The ratings should not be too frequent so as to impose an undue burden on the supervisor or to cover so short a period of time that material changes in performance could not normally occur. If too frequent, the ratings tend to become mechanical. Annual or semi-annual ratings are typical frequencies of rating used. Some companies schedule ratings on anniversary dates. Others schedule ratings for all employees at one time.

C. *Should the Ratings Be Discussed With the Employees?* The question of whether an individual employee's rating should be discussed with him has long been the subject of considerable controversy. Some of the advantages and disadvantages that have been advanced are as follows:

Advantages: Employees have the right to know what their supervisor thinks of them and what is expected of them. The supervisor-employee relationship should be one in which both parties are vitally interested in improving the employee's performance. As mentioned previously, through careful handling of the interview with the employee, discussion of the employee's rating can have a favorable influence on over-all morale and can perform an important function in achieving employee motivation and job satisfaction.

Disadvantages: Some authorities have argued that it is hazardous to show an employee his rating and to discuss it, since it may result in unnecessary arguments and may lead to more serious labor relations problems. In addition, they counsel that if supervisors know that they must discuss ratings with employees, supervisors may not make honest ratings. They believe that supervisors will have a tendency to avoid giving very high or very low ratings to employees for fear of repercussions from other employees in the first instance, and because of possible unpleasantness in discussions in the second instance.

It is felt that, in general, the disadvantages cited can be largely overcome through proper handling and preparation for employee interviews. Unless employees are informed of their ratings and given commendation or corrective training and guidance as warranted, much of the potential advantage to be gained from formal rating, in the field of improved morale, may be lost.

D. *Should Employees Be Permitted Appeals?* The question of whether employees should be permitted appeals would involve consideration of:

1. Its impact upon the supervisor's attitude if he knows that his ratings are subject to appeal.

2. The application of grievances procedure to appeals in companies where employees are unionized.

Advantages of Formalized Rating Plans

A formalized rating plan should not be looked upon as a method of merely "checking up" on employees. Rather, it should be viewed as a systematic method of enabling the supervisor to give impartial individual recognition and attention to each employee and to help each employee to improve his value to the company. As such, it serves both as means of improving over-all efficiency and of building employee morale.

Formal employee rating, by providing systematic performance evaluations, can aid the supervisor materially in important phases of personnel

administration; namely, correction, training, salary increases, promotions, transfers, downgrading and layoffs. It will aid in eliminating unsound decisions based upon impressions, bias and snap judgments.

Companies that have used it and are using it wholeheartedly recommend its further use for the aforesaid reasons, and also because it provides facts in the place of random "guess work" whether in the general area of employee relations or at the bargaining table in union discussions. They have found no other means of as satisfactorily demonstrating to employees and to unions that its personnel judgments are fair, consistent and based on an objective approach.

Companies of our industry may well give consideration to the use of formalized employee rating plans as a management tool. A realistic approach to current problems of personnel administration would dictate its full consideration. Systematic rating will not in itself, solve all these problems, but the service it can provide toward this end will be of a material value.

Effective Organization for Industrial Power Sales

(*Continued from page 269*)

ities definitely have a delayed effect.

Then, too, our competitors are not standing still. Even now, because of our shortages of material and slow delivery, engines are being bought on spot delivery, regardless of the customer's cost. The customers want production. They hope to get it this way —at higher costs.

Other, politically managed competitors are ever alert to any sales weakness. Aggressive sales activities are the best attack on such competition.

Selling is a leading function of business in our expanding economy—and our continued responsibility.

We seldom accomplish all we plan, but we never accomplish more than we plan.

So, to speed up our national marketing to this big 4 kilowatts for each 3, let's mechanize the first three steps and multiply our sales interviews through get-togethers, or we may all become "The Great Walking Fish from Sacandaga."

Northwest Electric Light & Power Ass'n Chooses New Officers

AT THE 41st Annual Meeting, Boise, Idaho, July 15, 1948, W. L. Thrailkill, assistant general manager of Washington Water Power Co., Spokane, was elected president of the Northwest Electric Light & Power Ass'n. He had been vice president of the Association for two years. He succeeds Tom E. Roach, president of Idaho Power Co., who has held the position during the past year. J. E. Corette, Jr., The Montana Power Co. was elected vice president.

A feature of the meeting was a visit to the power plant construction now under way by Idaho Power Co. on the Snake River and the Malad, a short tributary. These plants, said Mr. Roach, will bring in 155,000 kw of new generator capacity by the end of 1950, which will increase the company's capacity as it stood at the end of the war by 150 per cent, and practically double the company's capitalization. Ample load to justify this increased capital investment is in sight in homes, on farms, in lumber and mining and other industries, and in the processing of large deposits of phosphate rock in the company's territory. This program was commended by the meeting as a notable achievement in self sufficiency by free enterprise in a region where large federal power developments have tended to discourage the investment of private capital in generating facilities.

Other speakers at the meeting were: Ashton B. Collins, Reddy Kilowatt Service, who presented the results of a survey of teen-age reaction to the electrical industry; and Davis DeBard, Stone & Webster, who emphasized the importance of getting the industry story across to the youth of the nation.

In the election of officers, state vice presidents elected were: for Idaho, Ralph E. Gale, Idaho Power Co.; for Montana, R. C. Setterstrom, The Montana Power Co.; for Oregon, Frank M. Warren, Jr., Portland General Electric Co.; for Utah, Roy H. Ashworth, Utah Power & Light Co.; for Washington, H. C. Webb, Puget Sound Power & Light Co.; for British Columbia, Howard N. Walters, B. C. Electric Railway Co.; and as member-at-large of the Executive Committee, John Dierdorff, Pacific Power & Light Co. Z. E. Merrill, Mountain States Power Co., and T. E. Roach carry hold-over terms on the committee.

Again in recognition of the importance of the new bureau devoted to the joint problem of the manufacturers, wholesalers, contractors and dealers, the meeting elected both a member and alternative on the Executive Committee from each group. These were: manufacturers, Walter E. Potter, Lamp Department, General Electric Co., Portland, C. A. Morrison, Canadian General Electric Co., Vancouver; distributors, Dea Board, Afton-Lemp Electric Co., Boise, and John Longden, Westinghouse Electric Supply Co., Salt Lake City; contractors, Joseph T. Krivanek, Krivanek Electric Co., Longview, Wash., and R. B. Lane, Industrial Electric Co., Seattle; dealers, Reid Bigelow, Paris Co., Salt Lake City, and A. Therriault, Terry's Appliance Co., Boise.

Honorary Life Membership in the Association was awarded to six "old timers" in the industry, who had retired from active service with their companies in recent months. Those so honored were: Henry L. Senger, assistant to general superintendent, Idaho Power Co., long associated with hydroelectric development of that company; Calvin O. Crane, whose career as an engineer with Idaho Power closely paralleled that of Senger, except that Crane's was in the transmission and substation field; John D. Orr, assistant general manager of Idaho Power, with achievements in load building and farm electrification; Joseph W. Crowe, manager of Boise Division of Idaho Power, engineer, and veteran division manager; Fred W. Brownell, treasurer of Puget Sound Power & Light Co., the first to be honored by the Association from the accounting profession; and Dr. George W. Allison, Puget Sound Power & Light Co., whose long and active career in the field of spreading the electrical idea and the electric way of life through the Electric Refrigeration Bureau and the Modern Kitchen Bureau had brought him national recognition as the industry's super salesman.

Accident Prevention Committee Meeting

E. J. Kreh, *Chairman*

THE thirty-eighth meeting of the Accident Prevention Committee was held on May 4 and 5 at the Edgewater Beach Hotel in Chicago with 45 members and guests in attendance.

W. F. Brown presented the final accident experience of the industry for 1947. A summary of this data compared with 1946 follows:

	1947	*1946*
Manhours	503,856,664	467,671,772
Fatalities	156	93
Frequency Rate	15.41	14.81
Severity Rate	2.39	1.72

Nineteen additional fatalities occurred in combination gas and electric companies who did not report electric experience separately.

1947 Accident Experience

Great concern was expressed at the continued increase in frequency and the sharp increase in severity of accidents during 1947. The frequency reached a new high for the past 17 years and the severity increased almost 40 per cent over 1946. The increase in severity is caused almost entirely by the serious increase in the number of fatalities. D. C. Stewart stated that preliminary analysis of individual fatal accidents shows the same pattern that has been repeated every year since 1941 when the first detailed analysis was made. Many fatalities continue to occur because of failure to wear rubber gloves when within reach of energized conductors and equipment. H. O. Sprinkle added that analysis continues to show failure to plan work well and failure to take time to spot possible hazards before starting jobs.

D. T. Lacey and H. F. Webb emphasized the need for new and continually changing methods of approach to keep safety consciousness in the minds of supervisors, foremen and workmen. Repetitive approaches used year after year gradually lose effectiveness.

D. C. Duncan reported effective use of a safety observation plan whereby foremen are required to devote a portion of time each week to observing their men at work, noting and correcting unsafe practices that are observed and discussing each of these at safety conferences.

Dinsmore's Goat

C. H. "Cap" Dinsmore described a novel safety program which aided the Wisconsin Power and Light Company in establishing an enviable safety record of 2,025,832 accident-free manhours over an 8-month period during the past year. A continually rising accident trend beginning in 1945 had indicated the need for a different approach aimed at the individual. In view of Mr. Dinsmore's good individual contacts throughout the company it was decided to designate the last year before his retirement "Cap Dinsmore Year." Mr. Dinsmore was building a ranch-style home in northern Wisconsin so it was considered appropriate that he have a prize goat on the ranch. The goat was purchased and all available material on the care of goats was obtained from the Department of Agriculture. His attachment for the goat then was publicized throughout the company along with stories of how he raised it from a kid. However, it was pointed out that the one thing which would get Cap's goat was an accident. When the next accident occurred the operating division concerned became responsible for the care of the goat in accordance with the voluminous instructions which included even such items as manicuring and was required to submit a detailed weekly report describing the care and activities of the goat. This material was used as a basis for a "Goatgram" which was sent weekly to every employee's home. Anklets, a bell, a coat designed by Reddy Kilowatt and a trailer were obtained. A treadmill was built to emphasize a power shortage and a sound-slide film about the goat was shown throughout the operating area. This program eliminated many of the one- and two-day lost-time accidents since possession of the goat was embarrassing to the division and particularly to the employee concerned. Men tended to stay on the job in the face of minor injuries.

W. F. Brown reported that a sample survey of the accident experience of companies representing about 40 per cent of the industry for the first quarter of 1948 reveals a frequency rate still slightly higher than for a comparable period in 1947. However, there is an encouraging reduction of about 50 per cent in the severity rate with a similar reduction in fatalities.

The tenth in a series of Information Exchange Bulletins edited by W. R. Smith included descriptions of unusual accidents resulting from inadequate interconnection of grounds, exploding cans of insulating compounds, inadequate supervision of electrical testing by non-utility employees, failure to inspect a rotted pole and unexpected surges of hot water and steam from piping systems.

H. F. Webb reported good progress in the collection of data for a report on pole handling practices.

A. H. Doud summarized the results of a survey of 32 company practices concerning the use of flares and blinkers on trucks. Ninety-one per cent use flares and 66 per cent use blinkers although only 40 per cent and 9 per cent respectively, require their use on all trucks. Forty-three per cent favor the use of both flares and blinkers believing that the element of time involved in setting flares makes it desirable to have blinkers as well.

Stress Safe Design

T. J. Brosnan, Chairman of the Transmission and Distribution Committee, noted that analyses show that the greatest number of accidents consistently occur in the transmission and distribution departments. Although recognizing the importance of safety promotional programs he stressed the value of safe design as a second line of defense. Unfortunately, designs frequently receive thorough electrical and mechanical considerations and then, almost as an afterthought, safety considerations are taken into account. As an example of numerous design problems he referred to the wide variation in grounding practices at the primary level. He suggested that presentations before the Transmission and Distribution Committee describing designs that have been developed to improve safety and accidents that portray typical weaknesses in design will aid greatly in bringing safety consciousness to designers.

Round-table discussion sponsored by D. C. Duncan covered numerous subjects. G. S. Diehl showed samples of safety straps with straight-tongued buckles which stripped through the leather under test. Similar straps with curved tongues tested satisfactorily.

(*Continued on page* 289)

National Committee For Utilities Radio Succeeds R.T.P.B. Utilities Group

FOLLOWING the decision of the Administrative Committee of the Radio Technical Planning Board, on July 8, to dissolve that organization, a meeting was held in Chicago on July 9 to organize a successor committee to the very active group formerly known as Committee 4 of Panel 13—R.T.P.B. At times the former Committee 4 of Panel 13 has been referred to as the "Power Utilities Radio Communications Systems Committee." This was thought to be too long a name for general use, and therefore a new designation was adopted. The new committee is to be known as the "National Committee for Utilities Radio," and it will carry on the important work which was formerly done by C4 in the "Power Utility" Radio field.

Sponsors Invited

Those invited to sponsor the new organization include: American Gas Association, American Water Works Association, Association of Edison Illuminating Companies, Edison Electric Institute, Independent Natural Gas Association of America, National Rural Electric Cooperative Association, Rural Electrification Administration, and the ten Regional Groups of Power Utility licensees covering various sections of the United States. Most of these latter Regional Groups were organized at the suggestion of and under the guidance of the former Committee 4 of Panel 13.

The officers of the new National Committee for Utilities Radio, for the remainder of 1948, will be the same as those of the previous committee: R. V. Dondanville—Chairman; E. D. Glatzel—Vice-Chairman; and H. L. Davis, Jr.—Secretary. All standing committees have been reappointed with the same personnel. A By-Laws Committee, consisting of W. T. Bulla, Chairman, and J. M. Comly, D. G. Schreiner, and L. M. Webb were appointed to review the by-laws of the former committee and to suggest such changes as appear necessary in order to provide for the new organization.

The sponsoring groups have been invited to appoint not more than three representatives. These appointments are now being made and the complete personnel of the new committee will be announced very shortly.

The first item of business which the new National Committee for Utilities Radio undertook was the formulation of comments to be forwarded to the Federal Communications Commission on their new proposal for the reallocation of frequencies in the various bands and on the proposed new rules under which the licensees represented by this committee are to operate. Throughout the entire discussion repeated emphasis was placed on the importance of communications in this service and of their emergency nature and the public safety feature involved.

What the Utility President Expects from the Advertising Manager

(*Continued from page 262*)

manpower that will be required to manage and operate the utilities of those future proportions!

Think of the high order of brainpower that will be demanded for top management, the training, the skill!

And think here, today and tomorrow, and when you are back in your offices of the part that advertising must play, and will play, in this unprecedented development! Think of your part in it, your responsibilities, your opportunities!

You who direct the power of advertising, cannot lift your own sights too high. There is no ceiling on what you can accomplish, nor on what you should be expected to accomplish.

Without Advertising . . .

Without advertising, it is not certain that the utility business, as we know it today, could survive indefinitely, let alone progress and prosper.

I say this not to glorify advertising, but to emphasize the importance of advertising's responsibility to the utility business.

On this point I share the thinking of the president of a leading national advertising agency, who recently told a utility executive:

"When we start to do a public relations advertisement for you, the first thing we ask ourselves is, 'What would Abraham Lincoln say?'"

That's a good question. Rightly answered, it should help to produce a superior advertisement.

But the production of even superior advertising copy is only a fraction of the service which the advertising manager can perform for his company.

It seems to me that the ideal advertising manager has these basic qualifications:

He knows the utility business, and his own company, through and through.

He keeps abreast of every advance in advertising techniques.

He uses scientific advertising research to test copy and to demonstrate advertising results with convincing facts and figures.

He aids not only his immediate superior, but also the entire company organization.

He develops creative, constructive ideas for all departments.

He is prepared to give every other department the benefits of his special skill in communicating information so it will get attention and be understood.

He appreciates the importance of good employee relations, as well as good public relations, and his obligation to foster them.

He commands the confidence of his associates by his knowledge, judgment, team work and productivity.

The ideal advertising manager recognizes that advertising—like accounting or law—is a primary staff function of utility operation; and that through adequate performance of this function, he can make a maximum contribution in the field of top management.

There you have the picture, in broad outline, of what I think the utility president expects from the advertising manager.

Above all, have faith in the utility business, and in yourselves.

For the utility business needs the best that's in you, and America depends on the best that you and your business — the utility business — can produce.

New ASA Standards for Wood Poles

THE American Standards Association recently has approved and has just published American Standard Specifications and Dimensions for Wood Poles 05.1—1948. The new Standard supersedes American Standards 05.a—1933 and 05.1 to 05.6—1941 and War Standard 05.7—1945. The new Standard brings into one publication the various species formerly covered by the above series of specifications that now have been superseded.

As the allowable fiber stresses for the species included in the previous American Standards have not been changed, the new Standard is consistent with the National Electrical Safety Code. Certain of the miscellaneous conifers included in the superseded War Standard are contained in the new Standard. Except for western larch no changes in the fiber stresses were made in the miscellaneous conifers. Western larch was increased from 7400 to 8400 psi as a result of tests recently made. Chestnut has been discontinued as a species. A code for marking poles to determine the species, length, class and type of treatment has been included. In combining the other requirements for the various species into one Standard, some compromises were necessitated.

Further Research

While the new specifications represent definite progress, the ASA Sectional Committee has further work to do. Among the various species there are evidences of inconsistencies in the allowable fiber stresses. When the formulation of the standards for southern pine, western red cedar, northern white cedar and chestnut poles were initiated, the considerable data then available on strength tests of full length poles were used to determine the allowable fiber stresses. When the original standards for Lodgepole pine poles was prepared, a relatively higher fiber stress was used.

At the time the present combined Standard was being considered by the Sectional Committee, a larger volume of test data was available. Upon analysis of these data it was concluded that because of variations in methods of testing, moisture content and shape of the pole such data were inconclusive. The modulus of rupture of clear green specimens represents a much more definite figure. There appears to be a definite factor that determines the relation between the allowable fiber stress of a pole and the modulus of rupture of clear green specimens, the permissible fiber stress for a pole being about 18 to 20 per cent greater than that of clear green specimens. This factor was used in establishing the fiber stress values for the miscellaneous conifers not included in previous American Standards.

Lodgepole Pine Stresses

The Lodgepole pine stresses are on this same basis. However, southern pine, western red cedar and northern white cedar have allowable fiber stresses below that secured in applying the 18 to 20 percent factor. The suggestion has been made that all species of poles have their strength rated on the same basis. However, changing them at this time would affect the National Electrical Safety Code which has been adopted by a large percentage of the state commissions. Consequently, the Sectional Committee has this problem to consider in cooperation with the National Electrical Safety Code Committee.

Some of the general species are found classified into sub-species. In setting an allowable fiber stress for a general species the stress of the weakest sub-species must be used as the basis. For this reason the weakest subspecies of the true firs, that is, alpine, balsam and cork bark firs, have not been included in the new Standard. Because of similar discrepancies and their relatively low availability for pole timber, the spruces have also been eliminated.

Subcommittee VII on Wood Poles and Crossarms has recently been formed as a part of ASTM Committee D-7. One of the projects on which this Subcommittee is working is the development of a procedure for testing full length poles. It is hoped that as a result of the work of this Committee a standardized method can be developed so that reliable pole strength data can be determined from actual tests of full size poles.

L. G. SMITH

Accident Prevention Committee Meeting

(*Continued from page 287*)

W. Maclachlan emphasized the need for development of a pole butt testing procedure which will be used more consistently by linemen. The increasing use of aluminum ladders had indicated the need for establishment of suitable test and inspection procedures and G. S. Diehl recommended that this matter be referred to the ASA Ladder Committee. Catwalks and collapsible ladders were described as means of providing access to and from the cabs of overhead cranes in the event of an emergency while a job is in progress. The use of grounding chains has been discarded by most companies due to their comparatively high resistance. Several companies use glass face shields, leather coats and gloves for operating air break switches indoors. M. B. Monsen reported that his company had developed a guard for power chain saws.

Attention was called to the safety record of the Amesbury Electric Company which received the E.E.I. Safety Merit Award recently upon completion of 1,002,984 accident-free manhours. The unusual feature of this record is that due to the small size of the company 15 accident-free years were required to accumulate this total.

Safety Merit Award Summary

A summary of E.E.I. Safety Merit Awards reveal that 75 have been given to date. Nine of these were for completion of 2,000,000 accident-free manhours, one for 3,000,000 and one for 4,000,000. The greatest number of accident-free manhours reported was 4,891,465. Twenty-one companies have received 21 awards. Nine awards for entire systems have been given and two of these were for 2,000,000 manhours.

PERSONALS

F. B. CULLEY has been elected president of the Southern Indiana Gas & Electric Co., Evansville, succeeding J. A. BROWN of New York. Mr. Brown has retired from active participation in company affairs, but retains a seat on the board. Mr. Culley has been executive vice president of the company since he became associated with it in 1934. He went to Evansville at that time from the Georgia Power Co., where he served in the capacity of division manager at Augusta.

Mr. Culley is a past president and board member of the Indiana Electric Association and Indiana Gas Association, Evansville Chamber of Commerce and Evansville Committee for Community Development. In 1936, he received the Rotary Club Civic Award in recognition of his outstanding service to the community. He is a member of the board of directors of the Commonwealth & Southern Corp. of Delaware and the Commonwealth & Southern Corp. of New York.

Mr. Brown has been associated with the company for many years, first as a consulting gas engineer, later as board member and president. He maintained his office in New York and acted as a liaison officer between Southern Indiana Gas & Electric and its service company, Commonwealth & Southern of New York.

C. E. OSWALD, secretary of the company, was also elected to the additional office of vice president. He has been identified with the company for many years.

JOHN H. AIKEN has been elected a vice president of the Consolidated Edison Co. of New York, Inc. Mr. Aiken will be in charge of the company's purchasing and stores, fuel and commercial buildings departments. CHARLES B. DELAFIELD has been elected an assistant vice president, public relations.

Mr. Aiken joined the United Electric Light & Power Co., a predecessor of Consolidated Edison, in 1922 as statistician. He became treasurer of the New York Edison Co., another predecessor, in 1934 and was made general commercial manager of Consolidated Edison in 1936. He received the title of assistant vice president in 1938.

Mr. Delafield is an assistant to President Ralph H. Tapscott and will retain that title. He joined Consolidated Edison in that capacity in 1946. Earlier he was engaged in financial work and was associated with Kidder, Peabody & Co. He became identified with the Illinois Power Co. as assistant to the president in 1942 and was later made a vice president.

HERBERT C. DAVIDSON has retired as a vice president of the Consolidated Edison Co. of New York, Inc. Mr. Davidson joined the company in 1938 when he was elected chief accounting officer. He became a trustee in 1943, a member of the executive committee of the board of trustees and has been secretary of the board since 1934.

LEWIS R. GATY has been appointed manager of the engineering department of the Philadelphia Electric Co., succeeding K. M. IRWIN, who was recently elected vice president in charge of engineering.

Mr. Gaty has been identified with the utility industry since 1923, having served with the Pennsylvania Power & Light Co. and the Sioux City Gas & Electric Co., Sioux City, Iowa, before entering in 1926 the employ of the Counties Gas & Electric Co. at Norristown, later merged with Philadelphia Electric. Following a series of other assignments, each with increasing responsibilities, he was named assistant electric engineer of Philadelphia Electric in 1940. Since 1944 he has been serving in the capacity of electrical engineer.

A graduate of Cornell University in electrical engineering, Mr. Gaty is president of the company's employees' association and a member of the American Institute of Electrical Engineers.

S. J. PETTERSEN has been appointed vice president and treasurer of the Mississippi Valley Public Service Co. at Winona. R. M. HOWARD, vice president, has retired. Mr. Pettersen started with the utility in 1928 as a construction auditor and in 1938 was appointed treasurer and assistant secretary. At the time of his promotion to a vice presidency he was also elected to the board of directors. Mr. Howard had been with the company for 37 years and was identified with the electrical industry for the past 59 years. He has always been active in association work, having served as president of the North Central Electric Association in 1923.

WALTER D. KLINE, general counsel of Consumers Power Company and a member of the board of directors since 1945, has retired. His successor is WILLIAM R. ROBERTS, second ranking member of the Consumers legal department since 1945.

Mr. Kline was with Consumers since 1916. For many years he worked in close association with Clyde J. Holmes, the company's first general counsel, and when Mr. Holmes retired in 1945, Mr. Kline was chosen to succeed him.

A native of Calhoun County, Michigan, Mr. Kline was graduated from the University of Michigan Law School in 1907. He began traveling through the West, and when he reached McAlester, Okla., accepted appointment as assistant prosecuting attorney of Pittsburg County. He returned to Michigan in 1909 and began the practice of law in Battle Creek. He remained there until he joined the Consumers general office staff in Jackson, Mich., in 1916.

Mr. Kline was a member of the Jackson board of education for six years and its secretary for five. He headed a special committee which made a study of municipal finances and taxation in Jackson recently.

Mr. Roberts, a native of Calumet, Mich., was graduated from the University of Michigan Law School in 1915. He practiced law at Calumet from 1915 to 1917, spent two years in military service, then settled in Flint, where he practiced from 1919 until he joined Consumers in 1939. He was assistant prosecuting attorney of Genesee County from 1921 to 1925, and prosecuting attorney from 1925 to 1929. He was executive secretary of the Michigan State Crime Commission in 1929 and 1930 when the substantive criminal law was codified into the Michigan Penal Code.

H. EDMUND MACHOLD, vice president of the Niagara Hudson Power Corp., has received an honorary degree of doctor of science from Clarkson Institute of Technology, Potsdam, N. Y.

ELMER LINDSETH, president, Cleveland Electric Illuminating Company and vice president of the Edison Electric Institute, has been elected a member of the board of directors of the American Management Association.

E. R. KROPP has been appointed assistant to the president of the Union Electric Co., St. Louis. Mr. Kropp had previously been assistant secretary for the company, with which he has been associated since 1923.

L. M. ROBERTSON, assistant superintendent of hydro production and transmission, Public Service Co. of Colorado, is the new president of the Colorado Society of Engineers. Mr. Robertson is also vice president of the Colorado Engineering Council.

Announcement has been made of the appointment of EARL HARTSOCK to the position of superintendent of electric operations for the Columbus and Southern Ohio Electric Co., Columbus, Ohio.

Mr. Hartsock entered the employ of the Columbus utility in 1926, starting as a repairman in the electrical repair shop. Three years later he was assigned to substation operation and remained in that capacity while completing his education at Ohio State University. He received an E. E. degree in 1934.

More recently he has been engaged in various engineering and operating work and in 1946 was appointed assistant general superintendent of operation.

C. HERALD CAMPBELL has been appointed personnel director of Pacific Power & Light Co. He has just completed two years as assistant personnel director. With the Kaiser shipyard at Swan Island during the war as contract engineer, Campbell was responsible for all sub-contracting and handled claim adjustments.

JOHN E. BUCKLEY, JR., has been appointed rate engineer for the Boston Edison Co. He will be associated with the rate research and statistics department.

Mr. Buckley was graduated from the Massachusetts Institute of Technology in 1921 in electrical engineering. He has been more than 20 years with the Massachusetts Department of Public Utilities as rate engineer, assistant engineer and director of gas, electric and water utilities. Formerly he was active in construction engineering on power projects and was connected with the Consolidated Edison Co., New York, and the Charles H. Tenney organization, Boston.

OSBORNE A. BROWNE has been appointed electrical superintendent of stations for the Western Massachusetts Electric Co. He joined the company in 1931. Until his new appointment, Mr. Browne has been superintendent of stations in the company's central division. With headquarters at Turners Falls, he will have immediate charge of system operation, including operation and maintenance of system protective equipment. All hydro and primary substations in the division will continue under his supervision. LEON A. ALLEN has been appointed electrical construction supervisor for the company. He entered the company's service in the electrical department in 1930.

D. C. HAWLEY has been appointed superintendent of the underground system of the Kansas City (Mo.) Power & Light Co. Mr. Hawley became identified with the company in 1919 as a foreman in the underground department and for the past few years he has served as assistant superintendent of the underground system.

ALMER SKRETTING has been appointed superintendent of industrial sales for Wisconsin Electric Power Co., Milwaukee, succeeding O. O. WAGLEY, retired. Mr. Skretting has been engaged in power sales activities for the company since 1925 and had been assistant superintendent of industrial sales since 1945. He joined the staff of the Wells Power Co. in Milwaukee in 1922 and when that utility was absorbed by Wisconsin Electric Power the same year, he was assigned to duty in the station engineering division of the electric distribution department. In 1925 he entered the sales department. He is president of the Great Lakes Power Club and previously served that organization as secretary-treasurer and vice president. He is a member of the industrial power and heating section of the Edison Electric Institute and a member of the Engineers Society of Milwaukee.

WRIGHT CANFIELD, formerly head of the research department of the Public Service Co. of Oklahoma, has been appointed assistant to the president. Mr. Canfield has been connected with Public Service since 1930.

A. G. RICKBORN, formerly plant superintendent of the Derby Gas & Electric Co., Derby, Conn., has been made superintendent of the new Rex Brown generating station of the Mississippi Power & Light Company.

P. J. JOHNSON has been appointed supervisor of hydro plants by the Appalachian Electric Power Co., with headquarters in Roanoke, Va. Mr. Johnson has been superintendent of Appalachian hydro plants in the Kanawha Valley. He succeeds J. B. JUSTIN of Pulaski, who has resigned to become associated with his father as a consulting engineer in Philadelphia.

New Jersey Power & Light Company has announced the appointment of W. GRANT PARRY as General Sales Manager. Mr. Parry has had many years experience with the company as Industrial and Commercial Sales Manager and has been actively associated with the Edison Electric Institute and the State Chamber of Commerce.

L. E. TAYLER, senior engineer, lighting division, sales department of the Detroit Edison Co., has been elected president of the Illuminating Engineering Society.

Mr. Tayler became associated with the Detroit Edison Co. in 1924, following graduation from the University of Detroit with an E. E. degree.

He has been in close contact with the Better Light-Better Sight movement, having prepared many programs and assisted in the presentation of lectures in lighting courses and lighting schools.

OSCAR GAARDEN, manager of valuation sales, Northern States Power Co., Minneapolis, Minn., has retired. He has completed 30 years of continuous service with NSPCO. Mr. Gaarden first entered the public utility field as consulting engineer for the Manitoba Utilities Commission at Winnipeg and served that board for the next two years. In 1916 he transferred to the Wisconsin-Minnesota Light & Power Co. at Eau Claire, Wis., and was placed in charge of the distribution system of that company. The following year Mr. Gaarden became identified with Northern States in the distribution department as assistant engineer and three years later was transferred to the sales department as valuation engineer.

Three Sound Approaches to Good Customer Relations

(*Continued from page 276*)

they like, it is up to each individual employee to sell *himself*, and thereby his company, to every person with whom he has business dealings for the company. To the extent that our personnel are successful our companies will grow, with the end result that there will be *more* jobs, there will be *better* jobs and *greater security* for all.

Let me add one conclusion to the suggestion of basic training of employees in the fundamentals of good human relations. It isn't a "one-shot" proposition. Indoctrination programs are all right as far as they go; but people are naturally forgetful. The training, to be effective, must be repetitive and continuous. This does not mean that refresher sessions need be elaborate; but occasional reminders are helpful even to the oldest employees. Why? Because the problems of our business are ever changing; and because the cross section of the thinking of our customers is different today than yesterday, and will be different again tomorrow.

None of the ideas presented here are new, but some of them may have been neglected. It takes time and effort to make such a program effective, but after all, we cannot remain static. And we must put in the necessary effort if we are to accomplish the objectives we all hope to attain.

CONVENTIONS AND MEETINGS

1948

SEPTEMBER

9-10 Accident Prevention Committee, EEI, Antler's Hotel, Colorado Springs, Colo.
12-15 Rocky Mountain Electrical League, Hotel Colorado, Glenwood Springs, Colo.
20-21 Iowa Utilities Association, Fort Des Moines Hotel, Des Moines, Iowa.
20-24 Illuminating Engineering Society, National Technical Conference, Hotel Statler, Boston, Mass.
21-22 Pennsylvania Electric Association Annual Meeting, William Penn Hotel, Pittsburgh, Pa.
29-Oct. 2 International Association of Electrical Leagues, Mayflower Hotel, Washington, D.C.

OCTOBER

4-6 Meter and Service Committee, EEI, Sir Walter Raleigh Hotel, Raleigh, N. C.
4-8 American Gas Association, Auditorium, Atlantic City, N. J.
7-8 Pennsylvania Electric Association, Transmission and Distribution Committee, Bedford Springs Hotel, Bedford Springs, Pa.
11-12 Prime Movers Committee, EEI, William Penn Hotel, Pittsburgh, Pa.
11-12 Transmission and Distribution Committee, EEI, New Ocean House, Swampscott, Mass.
13-15 Indiana Electric Association, Annual Convention, French Lick Springs Hotel French Lick, Ind.
13-15 American Society of Civil Engineers, Fall Meeting, Boston, Mass.
14-15 Electrical Equipment Committee, EEI, William Penn Hotel, Pittsburgh, Pa.
18-22 36th National Safety Congress, Chicago, Ill.

NOVEMBER

1-3 Wisconsin Utilities Association, Commercial and Technical Divisions, Pfister Hotel, Milwaukee, Wis.
5-6 Public Utilities Association of the Virginias, Greenbrier Hotel, White Sulphur Springs, W. Va.
8-13 National Electrical Manufacturers Association, Hotel Traymore, Atlantic City, N. J.
10-12 Southeastern Exchange, General Sales Conference, Atlanta, Ga.
15-18 National Association of Railroad and Utilities Commissioners, Savannah, Ga.
17-19 National Farm Electrification Conference, Congress Hotel, Chicago, Ill.
28-Dec. 3 American Society of Mechanical Engineers, Hotels Pennsylvania and New Yorker, New York, N. Y.
30-Dec. 3 National Electrical Contractors Association, Roney Plaza, Miami Beach, Fla.

DECEMBER

5-8 The American Society of Refrigerating Engineers, Washington, D. C.

JANUARY—1949

19-21 American Society of Civil Engineers, Annual Meeting, New York, N. Y.
Jan. 31-Feb. 4 American Institute of Electrical Engineers, Hotel Pennsylvania, New York, N. Y.

MARCH

13-18 National Electrical Manufacturers Association, Winter Convention, Edgewater Beach Hotel, Chicago, Ill.
17-18 Oklahoma Utilities Association Annual Convention, Hotel Tulsa, Tulsa, Okla.
29-Apr. 1 Third International Lighting Exposition and Conference, Stevens Hotel, Chicago, Ill.

APRIL

5-7 Fifteenth Annual Sales Conference, EEI, Edgewater Beach Hotel, Chicago, Ill.
11-13 National Conference of Electric and Gas Utility Accountants, Book-Cadillac Hotel, Detroit, Mich.
13-15 Southeastern Exchange, Annual Convention, Boca Raton Hotel, Boca Raton, Fla.

MAY

1-6 National Electrical Wholesalers Association, Netherland Plaza Hotel, Cincinnati, Ohio.
2-4 Engineering Committees, EEI, Edgewater Beach Hotel, Chicago, Ill.
2-5 Chamber of Commerce of the U. S. A., Washington, D.C.
16-19 National Fire Protection Association, Fairmont Hotel, San Francisco, Calif.

JUNE

1-3 ANNUAL MEETING, EDISON ELECTRIC INSTITUTE, Atlantic City, N. J.
20-21 Public Utilities Advertising Association, Netherlands Plaza Hotel, Cincinnati, Ohio
27-30 Canadian Electrical Association, Lake Louise, Banff, Canada

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